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UNITED STATES – MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT (SECOND COMPLAINT)

Report of the Panel

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LIST OF ABBREVIATIONS

Abbreviation	Full Reference
1992 Agreement	Agreement concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft
ACEE	NASA Aircraft Energy Efficiency Program
ACT	NASA Advanced Composites Technology Program
AD Agreement	Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994
Airbus	Airbus S.A.S.
AJCA	American Jobs Creation Act
ASP	NASA Aviation Safety Program
AST	NASA Advanced Subsonic Technology Program
ATP	DOC Advanced Technology Program
B&O tax	Business and occupation tax, State of Washington
B&P	Bid and Proposal
BCA	Boeing Commercial Aircraft
BCI	Business Confidential Information
CBO	U.S. Congressional Budget Office
DOC	Department of Commerce
DOD	Department of Defense
DOL	Department of Labor
DSB	Dispute Settlement Body
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
EADS	European Aeronautic Defence and Space Company
EDGE tax credit	Economic Development for a Growing Economy tax credit, State of Illinois
ETI	Extraterritorial Income
FAA	Federal Aviation Administration
FSC	Foreign Sales Corporation
GATT 1994	The General Agreement on Tariffs and Trade 1994
HB 2294	House Bill 2294 in the State of Washington
HPCC	NASA High Performance Computing and Communications Program
HSBI	Highly Sensitive Business Information
HSR	NASA High Speed Research Program
IDS	Integrated Defense Systems
IP	Intellectual property
IR&D	Independent research and development
IR&D/B&P Program	Independent research and development/bid and proposal programme
IRB	Industrial Revenue Bonds of the City of Wichita, State of Kansas
IRS	U.S. Internal Revenue Service
ITAR	International Traffic in Arms Regulations
ITR	International Trade Resources
KDFA	Kansas Development Finance Authority
KDFA bonds	Kansas Development Finance Authority bonds, the State of Kansas
KSA	Kansas Statutes Annotated
LCA	Large Civil Aircraft

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Abbreviation	Full Reference
LERD	Limited exclusive rights data
MSA	Project Olympus Master Site Agreement between the State of Washington and Boeing
McDonnell Douglas or MD	McDonnell Douglas Corporation
NAC	NASA Advisory Council
NASA	The National Aeronautics and Space Administration
PE	Programme Element
QAT	NASA Quiet Aircraft Technology Program
R&D	Research and development
R&T Base	NASA Research and Technology Base Program
Relocation Act	Corporate Headquarters Relocation Act, State of Illinois
RDT&E	Research, Development, Testing, and Evaluation
SAA	Space Act Agreement
SCM Agreement	Agreement on Subsidies and Countervailing Measures
TIPRA	Tax Increase Prevention and Reconciliation Act of 2005
USDOC	United States Department of Commerce
Vienna Convention	Vienna Convention On The Law Of Treaties
VSP	NASA Vehicle Systems Program

BCI deleted, as indicated **[***]**

TABLE OF CASES

Short Title	Full Case Title and Citation
Argentina – Footwear (EC)	Panel Report, *Argentina – Safeguard Measures on Imports of Footwear*, WT/DS121/R, adopted 12 January 2000, as modified by Appellate Body Report WT/DS121/AB/R, DSR 2000:II, 575
Australia – Automotive Leather II	Panel Report, *Australia – Subsidies Provided to Producers and Exporters of Automotive Leather*, WT/DS126/R, adopted 16 June 1999, DSR 1999:III, 951
Australia – Salmon (Article 21.5 – Canada)	Panel Report, *Australia – Measures Affecting Importation of Salmon – Recourse to Article 21.5 of the DSU by Canada*, WT/DS18/RW, adopted 20 March 2000, DSR 2000:IV, 2031
Brazil – Aircraft	Appellate Body Report, *Brazil – Export Financing Programme for Aircraft*, WT/DS46/AB/R, adopted 20 August 1999, DSR 1999:III, 1161
Brazil – Aircraft	Panel Report, *Brazil – Export Financing Programme for Aircraft*, WT/DS46/R, adopted 20 August 1999, as modified by Appellate Body Report WT/DS46/AB/R, DSR 1999:III, 1221
Brazil – Aircraft (Article 21.5 – Canada II)	Panel Report, *Brazil – Export Financing Programme for Aircraft – Second Recourse by Canada to Article 21.5 of the DSU*, WT/DS46/RW/2, adopted 23 August 2001, DSR 2001:X, 5481
Canada – Aircraft	Appellate Body Report, *Canada – Measures Affecting the Export of Civilian Aircraft*, WT/DS70/AB/R, adopted 20 August 1999, DSR 1999:III, 1377
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Short Title	Full Case Title and Citation
China – Publications and Audiovisual Products	Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WT/DS363/AB/R, adopted 19 January 2010
Colombia – Ports of Entry	Panel Report, *Colombia – Indicative Prices and Restrictions on Ports of Entry*, WT/DS366/R and Corr.1, adopted 20 May 2009
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Short Title	Full Case Title and Citation
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Mexico – Corn Syrup (Article 21.5 – US)	Appellate Body Report, *Mexico – Anti-Dumping Investigation of High Fructose Corn Syrup (HFCS) from the United States – Recourse to Article 21.5 of the DSU by the United States*, WT/DS132/AB/RW, adopted 21 November 2001, DSR 2001:XIII, 6675
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US – Countervailing Measures on Certain EC Products	Panel Report, *United States – Countervailing Measures Concerning Certain Products from the European Communities*, WT/DS212/R, adopted 8 January 2003, as modified by Appellate Body Report WT/DS212/AB/R, DSR 2003:I, 73
US – Countervailing Measures on Certain EC Products (Article 21.5 – EC)	Panel Report, *United States – Countervailing Measures Concerning Certain Products from the European Communities – Recourse to Article 21.5 of the DSU by the European Communities*, WT/DS212/RW, adopted 27 September 2005, DSR 2005:XVIII, 8950
US – Export Restraints	Panel Report, *United States – Measures Treating Exports Restraints as Subsidies*, WT/DS194/R and Corr.2, adopted 23 August 2001, DSR 2001:XI, 5767
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US – FSC (Article 21.5 – EC)	Appellate Body Report, *United States – Tax Treatment for "Foreign Sales Corporations" – Recourse to Article 21.5 of the DSU by the European Communities*, WT/DS108/AB/RW, adopted 29 January 2002, DSR 2002:I, 55
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US – FSC (Article 21.5 – EC II)	Appellate Body Report, *United States – Tax Treatment for "Foreign Sales Corporations" – Second Recourse to Article 21.5 of the DSU by the European Communities*, WT/DS108/AB/RW2, adopted 14 March 2006, DSR 2006:XI, 4721
US – FSC (Article 21.5 – EC II)	Panel Report, *United States – Tax Treatment for "Foreign Sales Corporations" – Second Recourse to Article 21.5 of the DSU by the European Communities*, WT/DS108/RW2, adopted 14 March 2006, as upheld by Appellate Body Report WT/DS108/AB/RW2, DSR 2006:XI, 4761
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US – Hot-Rolled Steel	Appellate Body Report, *United States – Anti-Dumping Measures on Certain Hot-Rolled Steel Products from Japan*, WT/DS184/AB/R, adopted 23 August 2001, DSR 2001:X, 4697
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Short Title	Full Case Title and Citation
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US – Lead and Bismuth II	Panel Report, *United States – Imposition of Countervailing Duties on Certain Hot-Rolled Lead and Bismuth Carbon Steel Products Originating in the United Kingdom*, WT/DS138/R and Corr.2, adopted 7 June 2000, upheld by Appellate Body Report WT/DS138/AB/R, DSR 2000:VI, 2623
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US – Shrimp	Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, adopted 6 November 1998, DSR 1998:VII, 2755
US – Shrimp (Article 21.5 – Malaysia)	Panel Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products – Recourse to Article 21.5 of the DSU by Malaysia*, WT/DS58/RW, adopted 21 November 2001, upheld by Appellate Body Report WT/DS58/AB/RW, DSR 2001:XIII, 6529
US – Softwood Lumber III	Panel Report, *United States – Preliminary Determinations with Respect to Certain Softwood Lumber from Canada*, WT/DS236/R, adopted 1 November 2002, DSR 2002:IX, 3597
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US – Underwear	Appellate Body Report, *United States – Restrictions on Imports of Cotton and Man-made Fibre Underwear*, WT/DS24/AB/R, adopted 25 February 1997, DSR 1997:I, 11
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US – Upland Cotton	Panel Report, *United States – Subsidies on Upland Cotton*, WT/DS267/R, Corr.1, and Add.1 to Add.3, adopted 21 March 2005, as modified by Appellate Body Report WT/DS267/AB/R, DSR 2005:II, 299
US – Upland Cotton (Article 21.5 – Brazil)	Appellate Body Report, *United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil*, WT/DS267/AB/RW, adopted 20 June 2008
US – Upland Cotton (Article 21.5 – Brazil)	Panel Report, *United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil*, WT/DS267/RW and Corr.1, adopted 20 June 2008, as modified by Appellate Body Report WT/DS267/AB/RW

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Short Title	Full Case Title and Citation
US – Upland Cotton (Article 22.6 – US I)	Decision by the Arbitrator, *United States – Subsidies on Upland Cotton – Recourse to Arbitration by the United States under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement*, WT/DS267/ARB/1, 31 August 2009
US – Wheat Gluten	Appellate Body Report, *United States – Definitive Safeguard Measures on Imports of Wheat Gluten from the European Communities*, WT/DS166/AB/R, adopted 19 January 2001, DSR 2001:II, 717
US – Wheat Gluten	Panel Report, *United States – Definitive Safeguard Measures on Imports of Wheat Gluten from the European Communities*, WT/DS166/R, adopted 19 January 2001, as modified by Appellate Body Report WT/DS166/AB/R, DSR 2001:III, 779
US – Wool Shirts and Blouses	Appellate Body Report, *United States – Measure Affecting Imports of Woven Wool Shirts and Blouses from India*, WT/DS33/AB/R, adopted 23 May 1997, and Corr.1, DSR 1997:I, 323
US – Wool Shirts and Blouses	Panel Report, *United States – Measure Affecting Imports of Woven Wool Shirts and Blouses from India*, WT/DS33/R, adopted 23 May 1997, as upheld by Appellate Body Report WT/DS33/AB/R, DSR 1997:I, 343
US – Zeroing (Japan) (Article 21.5 – Japan)	Appellate Body Report, *United States – Measures Relating to Zeroing and Sunset Reviews – Recourse to Article 21.5 of the DSU by Japan*, WT/DS322/AB/RW, adopted 31 August 2009
US – Zeroing (Japan) (Article 21.5 – Japan)	Panel Report, *United States – Measures Relating to Zeroing and Sunset Reviews – Recourse to Article 21.5 of the DSU by Japan*, WT/DS322/RW, adopted 31 August 2009, upheld by Appellate Body Report WT/DS322/AB/RW

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I. INTRODUCTION

A. COMPLAINT OF THE EUROPEAN COMMUNITIES[1]

1.1 On 27 June 2005, the European Communities requested consultations with the United States pursuant to Articles 4.1, 7.1 and 30 of the SCM Agreement, Article XXIII:1 of the GATT 1994 and Article 4 of the DSU, with regard to measures affecting trade in large civil aircraft.[2] Consultations were held on 3 August 2005, but the parties failed to resolve the dispute.

1.2 On 20 January 2006, the European Communities requested the establishment of a panel pursuant to Article 6 of the DSU, Article XXIII:2 of the GATT 1994, and Articles 4, 7 and 30 of the SCM Agreement (to the extent that Article 30 incorporates by reference Article XXIII of the GATT 1994).[3]

B. ESTABLISHMENT AND COMPOSITION OF THE PANEL

1.3 At its meeting on 17 February 2006, the DSB established a Panel in accordance with Article 6 of the DSU to examine the matter referred to the DSB by the European Communities in document WT/DS353/2.[4]

1.4 The terms of reference are the following:

> "To examine, in the light of the relevant provisions of the covered agreements cited by the European Communities in document WT/DS353/2, the matter referred to the DSB by the European Communities in that document, and to make such findings as will assist the DSB in making the recommendations or in giving the rulings provided for in those agreements".

1.5 On 22 November 2006, Deputy Director-General Alejandro Jara, acting in place of the Director-General, composed the Panel as follows:

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[1] On 1 December 2009, the *Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community* (done at Lisbon, 13 December 2007) entered into force. On 29 November 2009, the WTO received a Verbal Note (WT/L/779) from the Council of the European Union and the Commission of the European Communities stating that, by virtue of the Treaty of Lisbon, as of 1 December 2009, the European Union replaces and succeeds the European Community.

[2] WT/DS353/1 (originally circulated as WT/DS317/1/Add.1 as corrected by WT/DS353/1), attached at Annex A. The present proceeding (*United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint*) (DS353), which was initiated when the European Communities requested consultations in June 2005, must be seen against the background of an earlier proceeding, which was initiated in October 2004 when the European Communities requested consultations with the United States in respect of alleged prohibited and actionable subsidies provided to U.S. producers of large civil aircraft. On 20 July 2005, the DSB established a panel in that proceeding (*United States – Measures Affecting Trade in Large Civil Aircraft*) (DS317), which panel was composed on 17 October 2005. In September 2005, the DSB initiated an Annex V procedure in the DS317 dispute and designated Mr. Mateo Diego-Fernández as the DSB representative for that procedure; WT/DSB/M/197, paras. 6-10. In its 27 June 2005 request for consultations, the European Communities referred to the United States' statement at the meeting of the DSB on 13 June 2005 asserting that 13 of the 28 subsidy programmes listed by the European Communities in its DS317 panel request were not listed in the DS317 consultation request of 6 October 2004. The European Communities indicated that it was unable to agree with the United States' contention but that it was prepared to pursue consultations on the issues raised in these subsequent proceedings in order to clarify and, if possible, resolve them.

[3] WT/DS353/2 (originally circulated as WT/DS317/5 as corrected by WT/DS353/2 and WT/DS353/2/Corr.1), attached at Annex B ("European Communities' Panel Request").

[4] WT/DSB/M/205, paras. 73-76.

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Chairperson: Mr. Crawford Falconer

Members: Mr. Francisco Orrego Vicuña
Mr. Virachai Plasai[5]

1.6 Australia, Brazil, Canada, China, Japan and Korea reserved their rights to participate in the Panel proceedings as third parties.

1.7 In its request for establishment of a panel in the DS353 proceedings, the European Communities requested that the DSB, together with the establishment of the panel, initiate the procedures for developing information concerning serious prejudice under Annex V of the SCM Agreement (Annex V Procedures for Developing Information Concerning Serious Prejudice) and that Mr. Mateo Diego-Fernández be designated as DSB representative.[6] At the DSB meeting of 17 February 2006, the United States indicated that it was not in a position to agree to the European Communities' request for the initiation of an Annex V procedure.

1.8 The European Communities subsequently raised the matter of the initiation of an Annex V procedure and the designation of a DSB representative at DSB meetings held on 14 March 2006, 17 March 2006 and 21 April 2006. At each of those meetings, the United States indicated that it was not in a position to consent to the initiation of the Annex V procedure in the DS353 proceedings. The European Communities took the position that the Annex V procedure in the DS353 proceedings had been initiated, and that Mr. Diego-Fernández had been designated as the DSB representative for that Annex V procedure.[7] At the DSB meeting held on 17 May 2006, the Chairman of the DSB proposed that the DSB take note of the parties' statements and agree to suspend consideration of this agenda item in order to allow consultations with a view to finding a way forward. The DSB took note of the statements and agreed to the Chairman's proposal.[8]

1.9 On 25 May 2006, the European Communities submitted a list of fact-finding questions to Mr. Diego-Fernández and asked him to put these questions to the United States in his capacity as DSB representative. Mr. Diego-Fernández considered that the Annex V process had not been initiated, and therefore returned the European Communities' request.[9] Mr. Diego-Fernández noted that his doing so was without prejudice to the right of the European Communities' to ask the Panel to seek information pursuant to Article 13.1 of the DSU.

C. PANEL PROCEEDINGS

1.10 Following consultation with the parties, the Panel adopted Working Procedures on 19 January 2007.[10]

1.11 At the request of the parties, and following consultations with them, the Panel adopted additional procedures for the protection of business confidential information ("BCI") and highly sensitive business information ("HSBI") for the panel proceedings on 19 February 2007 ("the

[5] WT/DS/353/3.

[6] European Communities' Panel Request. The European Communities indicated that its request is without prejudice to its position that all of the measures described in its request are properly before the panel that was established on 20 July 2005 and therefore were covered by the Annex V proceeding initiated by the DSB on 23 September 2005.

[7] See, e.g. WT/DSB/M/212, para. 67.

[8] WT/DSB/M212, paras. 70-71.

[9] Letter from Mr. Mateo Diego-Fernández to Mr. Raimund Raith, dated 6 June 2006, Exhibit EC-2 to the European Communities' Preliminary Ruling Request.

[10] These procedures were modified on various occasions, and are attached, in their final form, at Annex C.

BCI/HSBI procedures").[11] The Panel issued several rulings over the course of the proceedings with respect to the interpretation and application of the BCI/HSBI procedures, including regarding the designation of specific information as BCI or HSBI pursuant to those procedures in the parties' submissions and exhibits.[12]

1.12 On 24 November 2006, the European Communities submitted a request for preliminary rulings concerning the gathering of information in connection with its claims of serious prejudice.[13] The European Communities requested, *inter alia*, that the Panel rule that the Annex V procedure has been initiated, that Mr. Diego-Fernández has been effectively designated as a facilitator in that procedure, and that the United States is under an obligation to cooperate and answer the questions that have been put to it in the European Communities' letter to the Facilitator dated 25 May 2006.[14] The European Communities requested alternatively, that the Panel use the fact-seeking powers under Article 13 of the DSU and request the United States to provide certain information.[15] On 22 March 2007, the United States submitted its response to the European Communities' Preliminary Ruling Request.[16] The Panel also received letters from Canada and Brazil, dated 1 December 2006 and 21 December 2006 respectively, commenting on the European Communities' request.

1.13 Having carefully considered the views of the parties and third parties, the Panel issued a preliminary ruling concerning the request of the European Communities to the parties and third parties on 30 July 2007. That ruling is set forth in the Panel's findings at section VII.C.2.

1.14 On 21 December 2006, Brazil submitted a request for enhanced third party rights in this panel proceeding. A similar request was received from Canada on 22 December 2006. After careful consideration of this issue in the light of the comments received from the parties, the Panel on 23 February 2007 informed the parties and third parties of its decision declining to grant enhanced third party rights to any third party. The Panel offered its reasons for declining this request on 30 July 2007. Those reasons are set out in the Panel's findings at section VII.C.1.

1.15 The Panel met with the parties on 26 and 27 September 2007 and on 16 and 17 January 2008. At the request of the parties, and following consultations, the Panel adopted procedures for public sessions of its meetings with the parties. Pursuant to those procedures, the Panel held a portion of its meetings with the parties in public session, by means of a subsequent showing of video-recordings of the public sessions. The parties were given an opportunity to review the recordings to ensure no BCI or HSBI had been disclosed, and the recordings were shown in public on 28 September 2007 and 18 January 2008, respectively. The Panel met with the third parties on 15 January 2008.

1.16 The Panel posed its first set of questions to the parties and third parties on 7 November 2007, and received the responses on 5 December 2007.[17] The Panel posed its second set of questions to the parties and third parties on 3 March 2008, and received the responses on 14 April 2008.[18] The Panel

[11] These procedures were modified on various occasions, and are attached, in their final form, at Annex D.

[12] Selected rulings in this regard are attached at Annex E.

[13] Request for Preliminary Rulings by the European Communities 24 November 2006 ("European Communities' Preliminary Ruling Request").

[14] European Communities' Preliminary Ruling Request, para. 58.

[15] European Communities' Preliminary Ruling Request, para. 58.

[16] Response of the United States to the Request for Preliminary Rulings Submitted by the European Communities, 22 March 2007.

[17] The parties submitted comments on each other's responses on 21 December 2007.

[18] The parties submitted comments on each other's responses on 5 May 2008.

BCI deleted, as indicated **[***]**

posed its third set of questions to the parties on 3 July 2009, and received the responses on 31 July 2009.[19]

1.17 The Panel submitted its interim report to the parties on 15 September 2010. The Panel submitted its final report to the parties on 31 January 2011.

II. FACTUAL ASPECTS

2.1 This dispute concerns various alleged prohibited and actionable subsidies provided to and benefiting the United States' producers of large civil aircraft[20] (the "U.S. LCA industry"), including, in particular, The Boeing Company and McDonnell Douglas Corporation prior to its merger with Boeing:

(i) **Subsidies provided by state and local authorities.** The European Communities alleges that U.S. states and localities, where research, development, production and headquarters facilities of the U.S. LCA industry are located, transfer in various ways economic resources to the U.S. LCA industry. In this respect, the European Communities challenges measures in the States of Washington, Kansas and Illinois, and their municipalities.

(ii) **Subsidies provided by the federal government**. The European Communities alleges that the U.S. Federal Government transfers economic resources to the U.S. LCA industry on terms more favourable than available on the market or not at arm's length through certain measures applied by NASA, DOD, DOC, DOL and through certain federal tax incentives.

2.2 A detailed description of the measures at issue is contained in the European Communities' request for establishment, reproduced at Annex B of this report.

III. PARTIES' REQUESTS FOR FINDINGS AND RECOMMENDATIONS

A. EUROPEAN COMMUNITIES

3.1 The European Communities requests that the Panel find that the United States has acted inconsistently with its obligations under the SCM Agreement, because:

(a) the State of Washington's HB 2294 tax incentives and the FSC and ETI federal taxation schemes constitute prohibited subsidies, in violation of Articles 3.1(a) and 3.2 of the SCM Agreement[21];

(b) through various measures provided by the U.S. Federal Government, the State of Washington and municipalities therein, the State of Kansas and municipalities therein and the State of Illinois and municipalities therein, the United States has provided

[19] The parties submitted comments on each other's responses on 21 August 2009.

[20] The European Communities' request for establishment of a panel contains the following footnote: "In accordance with the *1992 Agreement between the European Communities and the Government of the United States of America concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft*, large civil aircraft ("LCA") included all aircraft as defined in Article 1 of the GATT Agreement on Trade in Civil Aircraft, except engines as defined in Article 1.1(b) thereof, that are designed for passenger or cargo transportation and have 100 or more passenger seats or its equivalent in cargo configuration. Boeing produces or markets the following families of LCA: 717, 737, 747, 757, 767, 777, and 787."

[21] European Communities' first written submission, para. 24.

actionable subsidies to Boeing's LCA division which cause serious prejudice to the interests of the European Communities within the meaning of Articles 5(c) and 6.3 of the SCM Agreement by means of :

(i) significant price suppression within the meaning of Article 6.3(c) of the SCM Agreement with respect to orders of Airbus' A330, Original A350, A350XWB-800, A320 and A340 families of LCA, or in the alternative, threat of significant price suppression with respect to deliveries of Airbus' A330, A350XWB-800, A320 and A340 families of LCA[22];

(ii) significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement with respect to orders of Airbus' A330, Original A350, A320 and A340 families of LCA or, in the alternative, threat of significant lost sales with respect to deliveries of Airbus' A330, A320 and A340 families of LCA[23];

(iii) displacement and impedance within the meaning of Article 6.3(a) of the SCM Agreement with respect to orders of Airbus' A330 and Original A350 family LCA, or in the alternative, threat of displacement and impedance with respect to deliveries of Airbus' A330 and A350XWB-800 families of LCA[24];

(iv) displacement and impedance within the meaning of Article 6.3(b) of the SCM Agreement with respect to orders of Airbus' A330, Original A350, A320 and A340 families of LCA, or in the alternative, threat of displacement or impedance with respect to deliveries of Airbus' A330, A350XWB-800, A320 and A340 families of LCA[25];

(v) threat of significant price suppression with respect to future orders of Airbus' A330, A350XWB-800, A320 and A350XWB-900/1000 families of LCA[26]; and

(c) the United States has violated agreed obligations concerning support to the LCA sector that are set forth in the *Agreement Concerning the Application of the GATT Agreement on Trade in Large Civil Aircraft* which constitutes serious prejudice to the European Communities' interests within the meaning of Article 5(c) of the SCM Agreement.[27]

3.2 Consequently, the European Communities asks the Panel to recommend that the United States:

(a) withdraw its prohibited subsidies without delay, as required by Article 4.7 of the SCM Agreement; and

(b) take appropriate steps to remove the adverse effects or withdraw the actionable subsidies, as required by Article 7.8 of the SCM Agreement.[28]

[22] European Communities' first written submission, paras. 1654, 1387, 1455.
[23] European Communities' first written submission, paras. 1654, 1446.
[24] European Communities' first written submission, paras. 1654, 1455.
[25] European Communities' first written submission, paras. 1654, 1455, 1640.
[26] European Communities' first written submission, para. 1654.
[27] European Communities' first written submission, para. 1055.
[28] European Communities' first written submission, para. 1656.

BCI deleted, as indicated **[***]**

B. UNITED STATES

3.3 The United States requests the Panel to find that the United States has acted consistently with its obligations under the SCM Agreement and to deny the relief requested by the European Communities.[29]

IV. ARGUMENTS OF THE PARTIES

4.1 The arguments of the parties are set out in their written and oral submissions to the Panel, in their answers to questions and in additional comments submitted pursuant to the Panel's request. The parties' arguments, as summarized by them are presented in this section.[30] The full non-confidential text of certain of the European Communities' submissions can be downloaded from the European Communities' web site.[31] The full non-confidential text of certain of the United States' submissions can be downloaded from the U.S. Government's web site.[32]

A. PRELIMINARY ISSUES

1. Arguments of the European Communities

4.2 In its panel request[33], the European Communities explained that it had initiated DS353 proceeding due, in part, to the U.S. non-cooperation in the Annex V process that had been initiated under DS317 proceeding, i.e. the European Communities' initial challenge of prohibited and actionable subsidies provided to U.S. producers of large civil aircraft. Specifically, the European Communities stated that it was regrettable that the United States decided to use unfounded procedural objections to undermine the Annex V process initiated in DS317. The European Communities asserted that the United States had decided not to provide answers on measures that the United States unilaterally determined to be outside the scope of that dispute, and had repeatedly blocked European Communities' endeavours to have the Panel rule authoritatively on the scope of the dispute. The European Communities contended in its panel request that this resulted in a deprivation of the European Communities' rights under the SCM Agreement to obtain the necessary information with respect to approximately half of the measures involved, and seriously undermined the European Communities' due process rights with respect to DS317 proceeding.

4.3 In its first written submission, the European Communities argues that if the United States had not opposed the initiation of the Annex V procedure in this dispute and an early decision by the Panel on the European Communities' Preliminary Ruling Request, the European Communities would be able to present more detailed and precise information on the subsidy measures at issue. It explains that as a result of this non-cooperation, the European Communities has had to base its first written submission solely on the non-confidential information that it has available from the United States.[34] Thus, the European Communities reserves the right to develop and add to its claims in the light of any information eventually provided once the Panel rules on the European Communities' Preliminary Ruling Request. In the meantime, the European Communities asks that the Panel accept the

[29] United States' first written submission, para. 1198.

[30] Pursuant to paragraph 12 of the panel's working procedures, the parties and third parties submitted non-confidential executive summaries of their written and oral submissions. The Panel issued its draft descriptive part based on those executive summaries, which it provided to the parties for comment on 17 November 2009. The Panel received comments from the parties on 15 December 2009.

[31] See http://trade.ec.europa.eu/wtodispute.

[32] See http://www.ustr.gov/Trade_Agreements/Monitoring_Enforcement/Dispute_Settlement/WTO/Section_Index.html.

[33] WT/DS353/2 (originally circulated as WT/DS317/5 as corrected by WT/DS353/2 and WT/DS353/2/Corr.1), attached at Annex B.

[34] Executive Summary of the European Communities' first written submission, para. 33.

information presented in its first written submission as the best information available and, as appropriate, draw adverse inferences.[35]

4.4 In its second written submission, the European Communities emphasises that the United States has continued its non-cooperation in providing critical information in this dispute. The European Communities recalls that at the first meeting of the Panel, the United States made it perfectly clear that it had no intention to provide any more information. As the European Communities asserts it has made its prima facie case, it argues that it is now the United States' burden to provide additional information (whether or not publicly available) to substantiate the United States' challenges to the European Communities' arguments and evidence. The European Communities expresses hope that the United States will disclose all relevant information in its responses to the Panel's questions, so that the measures at issue can be more fully analysed.[36]

4.5 The European Communities further notes two points. First, the drawing of adverse inferences from instances of non-cooperation is a general principle of the SCM Agreement that is applicable regardless of initiation of Annex V, and may be part of the making of a prima facie case by a complaining party. Second, to the extent the United States does not cite to specific portions of exhibits it has submitted, they must be disregarded by the Panel. In conclusion, the European Communities submits that the U.S. assertion that hundreds of exhibits that are not cited to anywhere in a submission could provide support for any of the U.S. arguments is patently absurd and inconsistent with the Appellate Body decision in *Canada – Wheat Exports and Grain Imports*.[37]

2. Arguments of the United States

4.6 With respect to the European Communities' Preliminary Ruling Request regarding Article 13 of the DSU, the United States contends that it sees no relevance to the European Communities' assertion regarding the Annex V procedure in DS317. Additionally, the European Communities has provided no basis for the Panel to conclude that the information it seeks is necessary to understand or evaluate the evidence or arguments presented by the parties. Finally, the United States emphasizes that the very format of the questions posed by the European Communities seems to miss the point of Article 13. The European Communities is not seeking "information" directed to addressing an argument made by the European Communities or the United States. Instead, the European Communities lists generic categories of documents, without regard as to whether they contain information of the type sought by the European Communities.[38]

4.7 The United States notes that in the procedural section of its first written submission, and then throughout the following arguments, the European Communities repeatedly asks the Panel to treat information referenced by the European Communities as the "best information available" and to draw adverse inferences with regard to certain facts. In contrast, the United States considers that the European Communities selected information that was decidedly not the "best", as it routinely disregarded readily available facts that contradicted its theories, even when those facts appeared in documents cited by the European Communities. Moreover, according to the United States, the European Communities' first written submission provides neither a factual basis nor valid legal justification for the Panel to take the radical step of drawing adverse inferences. Therefore, the United States argues that the Panel should proceed as panels normally do, by requiring the

[35] Executive Summary of the European Communities' first written submission, para. 34.
[36] Executive Summary of the European Communities' second written submission, para. 3.
[37] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 2.
[38] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 15.

complaining party to meet its burden of proof and set out a prima facie case of inconsistency with the covered agreements.[39]

4.8 Turning to the issue of adverse inferences, the United States recalls that the European Communities argues that adverse inferences are appropriate because, in the view of the European Communities, the United States failed to cooperate with information gathering when it (1) "opposed initiation of the Annex V procedure in this dispute" and (2) "opposed an early decision by the Panel on the European Communities' Preliminary Ruling Request".[40] With regard to the European Communities preliminary ruling request, the United States notes that it was the Panel that set the schedule. The United States simply expressed its views as to when the Panel should address the European Communities' Preliminary Ruling Request. It goes on to argue that the Panel was free to reject those views, but did not. And, once the Panel set a deadline, the United States responded one week in advance – hardly the action of a party that was inappropriately seeking to delay resolution of the European Communities preliminary ruling request.[41]

4.9 As for opposing initiation of an Annex V procedure, the key point, according to the United States, – and one that the European Communities has itself repeatedly made – is that the European Communities began DS353 to address problems arising from its disagreement with the United States about the validity of the panel request in DS317.[42] The United States submits that it never opposed initiation of an Annex V procedure with regard to the European Communities' claims of subsidization of large civil aircraft. In fact, it participated actively in the DS317 proceeding, submitting more than 40,000 pages of documents. The only thing the United States opposed was an unprecedented second Annex V procedure merely because the European Communities unilaterally decided, absent any guidance from the panel or the facilitator, that the United States failed to cooperate with the first. Thus, in the United States' view, there is no support for the European Communities' view that the United States failed to cooperate with information gathering with regard to its claims.[43]

4.10 Noting the European Communities' request for the Panel to exercise its discretion under Article 13 of the DSU, the United States called on the Panel to find that the European Communities' Preliminary Ruling Request is moot, as the filing of the European Communities first written submission has narrowed the scope of the European Communities' arguments. Furthermore, the United States' first written submission contains a large volume of information rebutting the European Communities' arguments, and the European Communities also apparently made use of some of the Annex V materials from DS317 in its submission. Therefore, according to the United States, the predicate of the European Communities' Preliminary Ruling Request – the supposed lack of information on the programs challenged by the European Communities – no longer holds true (if it ever did).[44]

[39] Executive Summary of the United States' first written submission, para. 2.
[40] Executive Summary of the United States' first written submission, footnote 5 referring to European Communities' first written submission, para. 60.
[41] Executive Summary of the United States' first written submission, para. 3.
[42] Executive Summary of the United States' first written submission, footnote 6.
[43] Executive Summary of the United States' first written submission, para. 4.
[44] Executive Summary of the United States' first written submission, para. 5.

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B. SUBSIDY PROGRAMMES

1. Arguments of the European Communities

(a) General overview

4.11 The European Communities contends that from its early days, Boeing and the U.S. Government have collaborated closely to advance the state of U.S. aeronautics technology, and to improve the competitive position of Boeing vis-à-vis international competition. This close relationship continues today, as valuable support pours into Boeing on an annual basis from multiple agencies of the U.S. Government – none of which is ever repaid. The governments of states and localities also aid this partnership in a very significant way, adding to the wealth of grants, tax breaks, and other support to which Boeing has become accustomed on the federal level. Furthermore, the European Communities asserts that with Boeing surpassing Airbus in LCA orders by a large margin in 2006, and at the same time continuing to drive down prices, the direct results of this support have never been clearer.[45]

4.12 The European Communities argues that it establishes its prima facie case that the United States has granted $23.7 billion in specific subsidies to the division of the Boeing Company ("Boeing") that produces large civil aircraft ("LCA") – i.e. Boeing's LCA division. It also contends that it shows that these subsidies are: (1) prohibited subsidies contingent upon export performance; and/or (2) actionable subsidies that cause serious prejudice, and therefore adverse effects, to the interests of the European Communities and its LCA manufacturer – Airbus.[46]

4.13 The European Communities asserts that the $23.7 billion in subsidies before the Panel comprise numerous measures implemented by various federal, state, and local governmental entities. Beginning with state and local subsidies at issue, the States of Washington, Kansas, and Illinois, and various localities therein, have provided over $800 million in benefits for Boeing, and have committed to provide over $4 billion in additional benefits beginning in 2007.[47] The bulk of these state and local incentives provided to Boeing are in the form of export contingent tax incentives provided by Washington State tied to the production of Boeing LCA. These incentives, in the words of Washington State Governor Gary Locke, are designed to help "Boeing to beat Airbus" and "give Airbus executives many sleepless nights for years to come".[48] In addition to state and local subsidies, Boeing has received almost $17 billion in funding and support from NASA, DOD, DOC, and DOL, with the bulk of this funding provided by NASA and DOD, primarily through their aeronautics R&D subsidies.[49] The U.S. Government has also provided almost $2.2 billion in export-contingent tax relief to Boeing under the FSC/ETI tax exclusion regimes that impacts the sales of Boeing LCA.[50]

4.14 The European Communities presents the following chart, which provides an overview of subsidies discussed in great detail in the European Communities' first written submission:[51]

[45] Executive Summary of the European Communities' first written submission, para. 2.
[46] Executive Summary of the European Communities' first written submission, paras. 1 and 35.
[47] Executive Summary of the European Communities' first written submission, para. 3.
[48] Executive Summary of the European Communities' first written submission, para. 4.
[49] Executive Summary of the European Communities' first written submission, para. 7.
[50] Executive Summary of the European Communities' first written submission, para. 20.
[51] Executive Summary of the European Communities' first written submission, para. 35.

BCI deleted, as indicated **[***]**

Figure 1: Overview of Subsidies to Boeing's LCA Division
(Millions of Dollars)

Entity	Name of Subsidy		Description of Subsidy	Total Amount
State of Washington and Municipalities Therein	HB 2294 Tax Incentives		State of Washington provides LCA-related: (1) business and occupation ("B&O") tax rate reductions; (2) B&O tax credits; (3) sales/use tax exemptions; (4) leasehold excise tax exemptions; and (5) property tax exemptions.	$3,456.7
	Everett B&O Tax Rate Reductions		City of Everett reduces the B&O tax rate paid by Boeing on LCA manufactured in Everett.	$67.5
	Project Olympus Master Site Agreement Subsidies		State of Washington and municipalities therein: (1) provide coordinators to facilitate 787 production; (2) provide job training incentives for 787 employees; (3) provide Boeing's 747 large cargo freighter ("LCF") with the same incentives accorded to the 787; (4) assume certain litigation costs; and (5) provide infrastructure-related subsidies to facilitate Boeing's LCA production in Everett, Washington.	$395.8
State of Kansas and Municipalities Therein	Wichita IRB Tax Breaks		City of Wichita provides property and sales tax breaks to LCA component production facilities in Wichita through the issuance of industrial revenue bonds.	$783.7
	KDFA Bonds		State of Kansas pays the interest on bonds that will be used to facilitate production of a portion of the 787 fuselage.	$122.0
State of Illinois and Municipalities Therein	Boeing Relocation Package		Pursuant to the relocation package for Boeing: (1) State of Illinois reimburses costs related to the relocation of Boeing's headquarters; (2) State of Illinois provides Boeing's headquarters with income tax credits; and (3) City of Chicago and Cook County provide property tax abatements for Boeing's headquarters.	$24.3
	Retirement of the Former Lease		City of Chicago pays to retire the lease of the former occupant of Boeing's headquarters in Chicago.	$0.5
U.S. Government	U.S. Aeronautics R&D	NASA ACT Program	NASA funds R&D related to composites technologies that will be utilized on the 787.	$417.7
		NASA HSR Program	NASA funds R&D related to high speed civil aircraft technology that also has applications for subsonic LCA.	$1,314.4
		NASA AST Program	NASA funds R&D related to improving environmental impact, safety, and efficiency of LCA.	$692.5
		NASA HPCC Program	NASA funds R&D related to computing and communications technology for the design and development of LCA.	$352.8
		NASA Aviation Safety Program	NASA funds R&D related to improving the safety of LCA.	$804.1
		NASA QAT Program	NASA funds R&D related to noise reduction technology for LCA.	$103.7
		NASA Vehicle Systems Program	NASA funds R&D related to improving environmental impact and efficiency of LCA.	$902.9

BCI deleted, as indicated **[***]**

Entity	Name of Subsidy	Description of Subsidy	Total Amount
	NASA R&T Base Program	NASA funds R&D related to basic and applied advanced LCA technologies.	$5,818.3
	DOD RDT&E Program	DOD funds R&D related to dual-use technologies – i.e. technologies applicable to both military and commercial aircraft.	$2,379.0
	DOC Advanced Technology Program	DOC funds R&D related to high risk, high pay-off, emerging and enabling technologies applicable to LCA.	$4.6
	NASA/DOD IP Right Waivers/Transfers	NASA and DOD transfer to Boeing valuable patent rights, rights to trade secrets, and exclusive rights to certain data for LCA-related and other technologies.	$726.4
	NASA/DOD IR&D/B&P Program	NASA and DOD reimburse Boeing for its own independent LCA R&D that is not related to any specific contract, as well as for its bid and proposal costs.	$3,108.3
	NASA/DOD Facilities, Equipment, and Employees	NASA and DOD provide their facilities, equipment, and employees for LCA-related R&D.	N/A[52]
	DOL 787 Worker Training Grants	DOL provides grants to help train 787 workers.	$1.5
	FSC/ETI	The U.S. Government lowers taxes paid by Boeing on each LCA produced and sold for use outside the United States.	$2,199.0
TOTAL			$23,675.5

4.15 The European Communities asserts that it shows that each of the items listed in Figure 1 above is a subsidy under Article 1.1 of the SCM Agreement – i.e. a financial contribution that confers a benefit on its recipients. The European Communities contends that the scope of the transactions covered by the term "financial contribution" in Article 1.1(a)(1) is broad. The types of financial contributions at issue in this dispute include: direct and potential direct transfers of funds pursuant to Article 1.1(a)(1)(i); government revenue otherwise due that is foregone or not collected pursuant to Article 1.1(a)(1)(ii); and provision of goods or services other than general infrastructure pursuant to Article 1.1(a)(1)(iii). A financial contribution confers a benefit when it "is provided on terms that are more advantageous than those that would have been available to the recipient on the market".[53]

4.16 Furthermore, the European Communities asserts that it demonstrates that each subsidy is specific under Article 2 of the SCM Agreement. The European Communities recalls that demonstrating specificity requires a showing that the subsidy is specific within the meaning of Article 2.1, unless the subsidy is prohibited under Article 3.1, in which case it is "deemed to be specific" pursuant to Article 2.3. The use of the phrase "certain enterprises", as set out in the chapeau to Article 2.1, according to the European Communities, reveals that the criterion is to be applied broadly.[54]

4.17 With respect to specificity, the European Communities observes that the United States misunderstands several key aspects of the European Communities' specificity analysis. Noting that the parties disagree on at least three critical aspects related to specificity, namely: (i) the role and proper

[52] The benefits from these subsidies are included in the European Communities' estimates of the benefits from NASA and DOD aeronautics R&D subsidies, and are therefore not listed separately. Amount of Subsidies to Boeing's LCA Division, note 8, Exhibit EC-17.

[53] Executive Summary of the European Communities' first written submission, para. 36.

[54] Executive Summary of the European Communities' first written submission, para. 37.

identification of "the granting authority"; (ii) the baseline with which disproportionality under Article 2.1(c) is to be determined; and (iii) the scope of the phrase "group of enterprises or industries", the European Communities makes the following observations.[55]

4.18 First, the European Communities contends that the question under Article 2.1 is whether a subsidy is specific to certain enterprises "within the jurisdiction of the granting authority", and the answer is based on evaluating the actions of the "granting authority". The European Communities points out that it is not in dispute that the "granting authorities" at issue with respect to the IP right provisions[56] and IR&D/B&P reimbursements[57] are NASA and DOD, not the entirety of the U.S. Government. The European Communities posits that if other granting authorities were relevant, a defending party could open the specificity analysis to an unlimited inquiry comparing the practice of every federal and local government entity with the practice of the granting authority at issue – thereby avoiding a finding of specificity under Article 2.1(a) for virtually every measure.[58]

4.19 Second, with respect to the assessment of disproportionality under Article 2.1(c), the European Communities argues that the relevant baseline is the recipient's economic position "within the jurisdiction of the granting authority", where "jurisdiction" refers to geographic jurisdiction. The U.S. approach of considering a ratio consisting of (a) "some information about Boeing" over (b) "comparable information about the group of recipients of the alleged subsidy as a whole", would gut the disproportionality factor in Article 2.1(c) of any meaning, since the granting authority would control the outcome of such a test.[59]

4.20 Third, the European Communities posits that, based on the ordinary meaning of "group", a "group of enterprises or industries" is a number of enterprises or industries that form a unity or whole based on some mutual or common relation or purpose, or some degree of similarity. Thus, the European Communities argues that a subsidy that is available to a group consisting of a sufficiently limited number of the corporations that operate within the jurisdiction of the granting authority must be specific, as in the case of ATP[60], which is limited to the group of U.S. companies that perform research into "high risk, high pay-off, emerging and enabling technologies".[61]

4.21 Finally, the European Communities notes that, wherever possible, it endeavours to estimate the value of the benefits to Boeing's LCA division from each of the subsidies at issue in this dispute using an allocation methodology based on publicly available information. Listing these estimated amounts in Figure 1 above, the European Communities requests the Panel to adopt these estimates as the best information available and, as appropriate, draw adverse inferences due to the U.S. non-cooperation in the information-gathering process.[62]

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[55] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 17.

[56] See section IV.B.1(c)(ii) below

[57] See section IV.B.1(c)(iii) below.

[58] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 18.

[59] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 19.

[60] See paras. 4.96-4.97 below.

[61] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 20.

[62] Executive Summary of the European Communities' first written submission, para. 38.

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(b) State support measures

(i) State of Washington and municipalities therein

4.22 In respect of the measures by the State of Washington and municipalities therein, the European Communities challenges a $4 billion package of risk-free tax, infrastructure, and other incentives, put into effect through a number of closely intertwined state and local measures and guaranteed to Boeing under the terms of the Project Olympus Master Site Agreement.

4.23 The European Communities clarifies that the challenged Washington State subsidies comprise a $3.92 billion package of tax breaks, infrastructure improvements, training incentives, and a variety of other measures designed, in their entirety, to allow Boeing to enjoy their benefits while being insulated from risk. These include the following:

- Tax subsidies: (i) HB 2294 B&O tax rate reductions; (ii) HB 2294 B&O tax credits; (iii) HB 2294 sales and use tax exemptions for computer hardware, peripherals, and software; (iv) HB 2294 sales and use tax exemptions for construction and equipment, leasehold excise tax exemptions, and property tax exemptions; and (v) City of Everett B&O tax rate reductions; and

- Project Olympus Master Site Agreement subsidies: (i) provision of project coordinators; (ii) job training incentives; (iii) 747 LCF incentives; (iv) support for legal proceedings; and (v) infrastructure-related subsidies (road improvements for Boeing Everett, 747 LCF landing fee waivers, Port of Everett Rail-Barge Transfer and South Terminal facilities, and utility rate freezes for Boeing Everett).[63]

4.24 The European Communities argues that all of these incentives were promised by Washington State Governor Gary Locke in his "final offer" letter to Boeing. They were put into effect through a number of intertwined[64] measures, including: HB 2294; Everett Ordinance 2759-04; the Memorandum of Agreement for Project Olympus between Washington State and Boeing; and the Project Olympus Master Site Agreement, through which Washington State and its localities committed to providing Boeing with these various incentives. Indeed, the packaged nature of these incentives is made explicitly clear in the MSA.[65]

4.25 In response to U.S. arguments regarding the specific subsidies provided by the State of Washington and municipalities therein[66], the European Communities notes that nothing in the arguments put forward and the facts pointed to by the United States affects the conclusion that the myriad of commitments made by the State of Washington and its localities in this "Boeing Incentive Package" are specific subsidies for the benefit of Boeing's LCA division.[67]

State and local tax incentives

4.26 The European Communities argues that the State of Washington has committed to provide almost $3.5 billion in tax breaks of benefit to Boeing over the next 20 years through HB 2294[68], and

[63] Executive Summary of the European Communities' second written submission, para. 6.
[64] For example, Section 1 of Everett Ordinance 2759-04 specifically references, and reiterates language from, the Project Olympus Master Site Agreement. European Communities' first written submission, para. 147.
[65] European Communities' second written submission, para. 30.
[66] Executive Summary of the European Communities' second written submission, para. 6.
[67] Executive Summary of the European Communities' second written submission, para. 7.
[68] Executive Summary of the European Communities' first written submission, para. 4.

the City of Everett has committed to provide an additional $67.5 million B&O tax rate reduction from 2006 through 2023.[69]

4.27 In particular, the European Communities, *inter alia*, asserts that the HB 2294 B&O tax rate reductions are a textbook example of a specific subsidy, as prior to the passage of HB 2294, commercial airplane and component manufacturers had to pay the general B&O tax rate for manufacturers of 0.484%, while after the passage of HB 2294, they pay a B&O tax rate that is 40% lower.[70] Therefore, the European Communities argues that the HB 2294 B&O tax rate reductions result in government revenue otherwise due that is foregone, and, therefore, a financial contribution, with respect to the entire period from FY 2006 through FY 2024.[71]

4.28 The European Communities recalls that HB 2294 established an exception for manufacturers of commercial airplanes and commercial airplane components from the general rule of B&O taxation for manufacturers in the State of Washington. In other words, but for HB 2294, commercial airplane and commercial airplane component manufacturers would pay a higher B&O tax rate throughout the period 1 October 2005 through 30 June 2024. The European Communities submits that this arbitrary, targeted, and tailored tax reduction cannot be exempted from the disciplines of the SCM Agreement, as the United States attempts to do through its misleading and irrelevant arguments regarding "pyramiding".[72]

4.29 The European Communities submits that the discussion by the United States of the impact of "pyramiding" and Washington State's alleged policy of "equalizing effective tax rates" is wholly irrelevant, as the measure challenged by the European Communities is HB 2294, and not the entire Washington State B&O tax system.[73] The text of HB 2294, and the circumstances supporting its passage, demonstrate that HB 2294 has absolutely nothing to do with "pyramiding", and everything to do with providing financial support for Boeing and its 787 programme.

4.30 Furthermore, the European Communities emphasizes that HB 2294 does not mention pyramiding, tax equalization, or anything alike. Rather, the law is about the "provision of tax incentives" to the aerospace industry. The European Communities also points to the general rule of taxation for manufacturers in Washington State, according to Washington State's own rules of taxation set forth in the Revised Code of Washington, which requires manufacturers to pay a B&O tax rate of 0.484%, and HB 2294, by its very terms, establishes an exception to this general rule for commercial airplane and commercial airplane component manufacturers.[74]

4.31 The European Communities claims that the United States was unable to point to any law, regulation, or policy in the State of Washington requiring the equalization of effective tax rates among all Washington businesses. The European Communities draws attention to the fact that all the United States repeatedly pointed to during the Panel's first meeting with the parties was a "study". In response to the United States' observations that absent HB 2294, the tax rate would be "speculative", the European Communities submits that "speculative" is not a benchmark.[75]

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[69] European Communities' first written submission, para. 156.

[70] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 3.

[71] Executive Summary of the European Communities' second written submission, para. 8.

[72] Executive Summary of the European Communities' second written submission, para. 8.

[73] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 3.

[74] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 3.

[75] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 4.

BCI deleted, as indicated **[***]**

4.32 The European Communities rejects the U.S. argument that the HB 2294 B&O tax rate reductions do not constitute foregoing of revenue otherwise due as baseless, because HB 2294 established special lower B&O tax rates for commercial airplane and component manufacturers, as compared to the general B&O tax rate for manufacturers in Washington State. The European Communities explains that HB 2294 – the measure at issue – is moreover explicitly limited to manufacturers, retailers, and wholesalers of commercial airplanes and components, and consequently is specific.[76]

4.33 The European Communities also rejects the U.S. argument that the relevant amount of any financial contribution resulting from the HB 2294 B&O tax rate reductions is only the revenue actually foregone in FY 2006-FY 2007 as being without merit. In advancing this legal argument, the United States makes a fundamental error by relying entirely on a provision of the SCM Agreement – Article 1.1 – that simply does not address the issue of subsidy amount.[77]

4.34 Responding to the evidence regarding pass-through to Boeing of the benefits from the Washington State B&O tax rate reductions to Boeing suppliers, the European Communities claims that the United States repeats its basic approach, i.e. stating that evidence exists contrary to the European Communities' evidence and argument that a measure confers a benefit, but failing to provide that other evidence.[78] The European Communities maintains that the B&O tax rate reductions to Boeing's LCA component producers pass through to Boeing's LCA division according to both evidence from Washington State and expert analysis by Professors Paul Wachtel and John Asker of New York University, and the United States has not refuted this evidence.[79] It notes that former Governor Locke himself has made it clear that the benefits of the HB 2294 B&O tax rate reductions received by Boeing's Washington State suppliers pass through to Boeing's LCA division.[80]

4.35 Finally with regard to the HB 2294 B&O tax rate reductions, recalling that the United States made it patently clear during the Panel's second meeting with the parties that Washington State applies a B&O tax rate of 0.484% to manufacturers operating within the State, except for certain specialized manufacturers – such as commercial aircraft manufacturers – for which the State has granted special lower rates (i.e. "sector-specific adjustments"), the European Communities submits that this confirms that the adjustment of B&O tax rates in HB 2294 constitutes revenue otherwise due that is foregone.[81]

4.36 In addition to the HB 2294 B&O tax rate reductions, the European Communities also claims that the State of Washington provided the following additional tax incentives to Boeing through HB 2294: B&O tax credits for preproduction development, computer software and hardware, and property taxes;[82] sales and use tax exemptions for computer hardware, peripherals, or software used in the development of commercial airplanes or their components, and for construction and equipment related to new buildings used in the manufacturing of superefficient airplanes;[83] leasehold excise tax exemptions for manufacturers engaged in the manufacturing of superefficient airplanes that are

[76] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 3.
[77] Executive Summary of the European Communities' second written submission, para. 9.
[78] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 2.
[79] Executive Summary of the European Communities' second written submission, para. 10.
[80] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 3.
[81] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 3.
[82] European Communities' first written submission, para. 109.
[83] European Communities' first written submission, para. 117.

leasing certain port district facilities;[84] and property tax exemptions for manufacturers engaged in the manufacturing of superefficient airplanes that are lessees of a port district.[85] Further, the European Communities claims that the City of Everett enacted a 75% reduction in its B&O tax rate for manufacturing activities through Ordinance 2759-04 when the value of the products manufactured exceeds $6 billion to $8 billion,[86] and Boeing is the only company to manufacture products in Everett worth more than $6-$8 billion per year.[87] The European Communities has demonstrated that the various tax measures enacted through HB 2294 and Everett Ordinance 2759-04 are specific subsidies to Boeing's LCA division.[88]

Project Olympus Master Site Agreement subsidies

4.37 The European Communities argues that the State of Washington and municipalities therein have committed to provide almost $400 million in other incentives, including training facilities and infrastructure improvements, in connection with production of the 787.[89] More specifically, the State of Washington committed to the following series of incentives in the Project Olympus Master Site Agreement designed to benefit Project Olympus – i.e. Boeing's 787 assembly facility:

– providing Boeing with coordinators to help start up Project Olympus;

– creating a workforce development programme and building an Employment Resource Center to train Boeing's employees that will work on assembling 787 LCA;

– helping Boeing develop and produce the 747 LCFs that Boeing will use to transport 787 components to Everett by extending to 747 LCFs the same tax and other incentives provided to the 787; and

– insuring Boeing against litigation risk related to the Project Olympus Master Site Agreement.[90]

In addition, the State of Washington, Snohomish County, the Port of Everett, and the City of Everett committed in the Project Olympus Master Site Agreement to the following series of incentives aimed at improving or facilitating Boeing's use of infrastructure:

– specific road access improvements for the benefit of Boeing's LCA production facilities in Everett, undertaken by the State of Washington and City of Everett;

– the waiver of landing fees for Boeing's 747 LCFs at Paine Field to lower the costs of transporting 787 components to Everett, undertaken by Snohomish County;

– improvements to rail-barge transfer capabilities and expansion of the South Terminal facility to facilitate the transportation of 787 components to Everett, undertaken by the Port of Everett; and

[84] European Communities' first written submission, para. 122.
[85] European Communities' first written submission, para. 126.
[86] European Communities' first written submission, para. 148.
[87] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 29.
[88] European Communities' second written submission, para. 31.
[89] Executive Summary of the European Communities' first written submission, para. 4.
[90] European Communities' first written submission, para. 163.

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– the freezing of rates for water, sanitary sewer, solid waste, and process wastewater services utilized by Boeing's LCA production facilities in Everett, undertaken by the City of Everett and Snohomish County.[91]

The European Communities argues that all of these incentives are subsidies that are part of an agreement specifically between Boeing and the State of Washington – i.e. the Project Olympus Master Site Agreement. They cost Boeing nothing and their economic value is in fact guaranteed to Boeing under the terms of that Agreement.[92]

4.38 Furthermore, the European Communities argues that the road and port improvements at issue do not constitute general infrastructure, since they were, as a result of negotiations, tailored to Boeing's requirements and guaranteed to Boeing.[93] More specifically, the European Communities maintains that the 787 Road Improvement Package and Port of Everett rail-barge and South Terminal improvements do not constitute general infrastructure. The European Communities argues that this is confirmed by the facts adduced by it – e.g. legal rights to Boeing-specified improvements, preferential access, etc.[94] In sharp contrast to the statement by the United States that "the European Communities sets forth a couple of facts out of context for each challenged infrastructure measure", the European Communities asserts that it pointed to a myriad of facts pertaining to each of these measures, including the existence of numerous legal rights retained by Boeing with respect to each measure. Importantly, the European Communities points out that the United States has at no point disputed the existence of any of these facts.[95] Thus, the European Communities submits that it has demonstrated that the road and port improvements are not general infrastructure, as Boeing has a legal right to these improvements, which are tailored to Boeing's own requirements. In addition, the European Communities emphasizes the fact that Boeing has preferential use of the port facilities.[96]

4.39 The European Communities also submits that, should the Panel consider the road and port improvements themselves to be general infrastructure, in the alternative, the rights given to Boeing in connection with the road and port improvements constitute the provision of goods and services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement. These rights were provided only to Boeing, and they give Boeing legal certainty with respect to elements of the road and port improvements that are important to the operation of its production facility and that could otherwise result in economic losses. Thus, they provide a benefit to Boeing that is not available on the market.[97]

4.40 Turning to the "Make Whole" provision of the Project Olympus Master Site Agreement, the European Communities submits that this provision plays a critical role in guaranteeing for Boeing each of the subsidies in the $3.92 billion Boeing Incentive Package. The U.S. contention that this is "simply a 'best efforts' provision that encourages the Parties to comply with their commitments to the

[91] European Communities' first written submission, para. 164.
[92] European Communities' first written submission, para. 165.
[93] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 3.
[94] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 4.
[95] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 4.
[96] Executive Summary of the European Communities' second written submission, para. 11.
[97] European Communities' response to question 249, paras. 454, 459; European Communities' response to question 364, para. 188.

extent legally permissible" is absurd and contrary to the plain meaning of the text of the provision that would be found under domestic law.[98]

(ii) State of Kansas and municipalities therein

4.41 In respect of the measures by the State of Kansas and its localities, the European Communities argues that Boeing's LCA division has received $784 million in property and sales tax benefits from City of Wichita industrial revenue bonds, and an additional $122 million benefit from State of Kansas bonds.[99]

4.42 The European Communities argues that the United States has not satisfactorily contested the European Communities' prima facie case that the City of Wichita, through property and sales tax breaks associated with industrial revenue bonds, and the State of Kansas, through bonds issued by the KDFA, provide subsidies benefiting Boeing's LCA division that are specific within the meaning of Articles 1 and 2 of the SCM Agreement.[100]

Wichita IRB tax breaks

4.43 The European Communities contends that the City of Wichita, Kansas, has provided property and sales tax abatements associated with almost $4 billion in industrial revenue bonds issued on behalf of the Wichita facilities used to produce parts for Boeing LCA.[101] The European Communities also alleges that through a complicated legal scheme, the sole intention and consequence of these industrial revenue bonds has been to provide property and sales tax breaks benefiting Boeing.[102]

4.44 The European Communities rejects the U.S. argument that the industrial revenue bonds result in no financial contributions as baseless, because the general Kansas property tax exemption to which the United States refers applies only to commercial and industrial machinery and equipment acquired after 30 June 2006. Further, the European Communities contends that it has established that the expected value of future bond-related subsidies to Spirit (i.e. the new owner of Boeing's commercial operations in Wichita and current co-producer of Boeing LCA) passed through to Boeing pursuant to the terms and conditions of Spirit's purchase of Boeing's Wichita facilities, based on expert analysis by Professor Paul Wachtel of New York University. The European Communities notes that Boeing's share of industrial revenue bonds is also disproportionate to its economic position in the City of Wichita.[103]

4.45 With respect to industrial revenue bonds, the European Communities contends that the U.S. argument that the industrial revenue bonds result in no financial contributions fails principally because the general Kansas property tax exemption to which the United States refers applies only to commercial and industrial machinery and equipment acquired after 30 June 2006. It maintains that the industrial revenue bonds received by both Boeing and Spirit result in benefits for Boeing's LCA division, as Spirit passes through its IRB benefits to Boeing's LCA division, which is demonstrated by basic principles of asset pricing. These industrial revenue bonds are specific because the share of

[98] Executive Summary of the European Communities' second written submission, para. 12.
[99] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 4.
[100] Executive Summary of the European Communities' second written submission, para. 13.
[101] Executive Summary of the European Communities' first written submission, para. 5.
[102] Executive Summary of the European Communities' first written submission, para. 5.
[103] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 4.

industrial revenue bonds received by Boeing and Spirit is disproportionate to their share of the Wichita economy.[104]

4.46 In relation to the issue of specificity, the European Communities contends that, contrary to the U.S. assertions, it has taken into account the diversification of economic activities in Wichita in its specificity analysis. Indeed, it asserts that in an economy where manufacturers "produce everything from motorcycles to computer storage devices"[105], the fact that Boeing has received as much as 69% of the IRB-related property tax abatements provided by Wichita, as compared to its (at most) 16% share of the local economy, confirms that these subsidies are de facto specific. The European Communities also objects to the United States' rhetoric, alleging that the United States has never offered any measure of Boeing's share of the local economy based on a factor other than employment.[106]

KDFA bonds

4.47 The European Communities argues that the State of Kansas, through the KDFA, has also issued $80 million in bonds related to the production of a portion of the 787 fuselage in Wichita.[107] The European Communities asserts that these bonds are a means to the end of providing twenty years of semi-annual grants benefiting Boeing's 787 project.[108] In case there were any doubt for whom these KDFA bonds and the implementing legislation were intended, the European Communities points to the fact that the State dubbed them "Boeing Bonds".[109]

4.48 With respect to KDFA, the European Communities maintains that the KDFA bonds are specific subsidies that benefit Boeing's LCA division.[110] The European Communities claims it has demonstrated that Spirit passes the benefits of these bonds through to Boeing's LCA division, based on expert analysis by Professor Paul Wachtel of New York University; and the bonds were specific because they were made available to only Boeing, and its successor entity, Spirit.[111]

European Communities' arguments in relation to the Boeing-Spirit transaction

4.49 The European Communities considers that the United States' attempt to rebut the European Communities' pass-through argument fails.[112] More specifically, it takes issue with the fact that the United States simply asserts that Spirit does not pass through benefits it receives from industrial revenue bonds and KDFA bonds to Boeing, but refuses to provide any information to support this assertion.

4.50 The European Communities emphasizes that Spirit is actually a co-producer of Boeing LCA, and as such, part of the U.S. LCA industry, which is the industry that is the subject of the

[104] Executive Summary of the European Communities' second written submission, para. 14.
[105] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, footnote 2.
[106] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 6.
[107] Executive Summary of the European Communities' first written submission, para. 5.
[108] Executive Summary of the European Communities' first written submission, para. 5.
[109] Executive Summary of the European Communities' first written submission, para. 5.
[110] Executive Summary of the European Communities' second written submission, para. 15; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 5.
[111] Executive Summary of the European Communities' second written submission, para. 15.
[112] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 6.

European Communities' claims in this dispute.[113] Importantly, Spirit is not an "independent entity, unrelated to Boeing", as the United States asserts; rather, it is the successor entity to Boeing's Wichita operations with an ongoing special relationship with Boeing. Moreover, at the critical time for assessing pass-through – i.e. at the time the Boeing-Spirit transaction closed – Spirit had no relationship with Airbus, while the City of Wichita had already expressed its intent to issue industrial revenue bonds for Spirit and Spirit had already applied for its KDFA bonds.[114]

4.51 The European Communities further explains[115] that the terms of the Boeing-Spirit transaction in February 2005, providing for pass-through to Boeing of future subsidy benefits, were based on the reasonable expectations that Boeing's successor in Wichita would receive industrial revenue bonds and KDFA bonds. Although the United States notes that the European Communities has provided no evidence that the terms of the Boeing-Spirit agreement were altered between February and June 2005 to take into account the benefits of future bonds, the European Communities argues that it is no surprise that there is no such evidence, since the events leading up to the closing of the transaction in June 2005[116] confirmed the parties' February 2005 expectations, meaning there was nothing to amend.[117] The European Communities maintains that, in responding to the evidence regarding pass-through to Boeing of the benefits from the Kansas measures to Spirit, the United States follows the approach of stating that evidence exists contrary to the European Communities' evidence and argument that a measure confers a benefit, but failing to provide that other evidence.[118]

4.52 The European Communities maintains its argument that there were clear expectations that Spirit would receive both industrial revenue bonds and KDFA bonds prior to the closing of the arm's length Boeing-Spirit transaction, and, as such, Spirit passed the future benefits of these subsidies through to Boeing's LCA division as part of the overall transaction. The European Communities maintains that these subsidies are specific, as the amount of industrial revenue bonds received by Boeing and Spirit is disproportionate to their share of the local economy, and as only Boeing's successor (Spirit) has received the KDFA bonds.[119]

(iii) State of Illinois and municipalities therein

4.53 The European Communities argues that the State of Illinois and its localities have provided an incentive package for Boeing's corporate headquarters, consisting of relocation expense reimbursements and tax breaks. The European Communities contends that the U.S. claim that these measures are not specific lacks merit, as Boeing was the only intended beneficiary, and the only actual beneficiary.[120]

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[113] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 5.

[114] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 6.

[115] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 5.

[116] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, footnote 1. Specifically, the 25 May 2005 Spirit IRB letter of intent, the 9 May 2005 Spirit application for KDFA bonds, and the 9 June 2005 KDFA resolution declaring its intent to issue the bonds.

[117] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 5.

[118] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 2.

[119] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 5.

[120] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 5.

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Boeing relocation package

4.54 The European Communities argues that the State of Illinois and municipalities therein provide specific subsidies to Boeing through a package of measures enacted pursuant to the Relocation Act. These measures include: relocation expense reimbursements; 15-year EDGE tax credits; and local property tax abatements in connection with relocated corporate headquarters.[121]

4.55 The European Communities further asserts that this generous and long-term incentive package was provided to Boeing in connection with its decision to relocate its corporate headquarters to Chicago, Illinois, in 2001.[122] The European Communities notes that legislators often referred to the associated Relocation Act as the "Boeing package".[123] The European Communities adds that, as part of the relocation incentives, the City of Chicago even wrote a check to the landlord of Boeing's headquarters building, to help ensure that Boeing could have the building of its choice, at the time of its choosing, without having to pay a premium.[124]

4.56 Noting that the U.S. arguments related to these measures focus on limiting the amounts of the financial contributions to the past, and arguing that these measures are not specific, the European Communities submits that all of these measures were properly referenced in the consultation and panel requests, and were in existence well before this Panel was established. They therefore result in financial contributions regardless of whether the transfer of funds or foregoing of government revenue otherwise due takes place in the past, present, or future. The European Communities submits that these measures are all specific because Boeing was the only intended beneficiary, and the only actual beneficiary, of the Relocation Act, pursuant to which each of these measures was enacted. The property tax cuts are also specific because the relevant ordinances and agreements explicitly limit them to Boeing.[125]

4.57 Finally, the European Communities emphasizes the fact that the United States accepts that the relocation expense reimbursements, EDGE tax credits and local property tax abatements are subsidies, and that the United States has failed to rebut the European Communities' arguments as to the amount and specificity of these subsidies.[126]

Retirement of former lease

4.58 The European Communities recalls the United States' admission that the lease retirement payment by the City of Chicago constitutes a specific subsidy to Boeing's LCA division.[127]

(c) U.S. Federal Government measures

4.59 Generous as these state benefits are, the European Communities submits that the main source of U.S. subsidies to Boeing has always been the federal government. Boeing has received almost $17 billion in funding and support from NASA, DOD, DOC, and DOL. The bulk of this funding is provided by NASA and DOD, primarily through their aeronautics R&D subsidies. NASA and DOD also grant Boeing IP rights to valuable research results, including patents, trade secrets, and data

[121] Executive Summary of the European Communities' second written submission, para. 16.
[122] Executive Summary of the European Communities' first written submission, para. 6.
[123] Executive Summary of the European Communities' first written submission, para. 6.
[124] Executive Summary of the European Communities' first written submission, para. 6.
[125] Executive Summary of the European Communities' second written submission, para. 17.
[126] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 6.
[127] Executive Summary of the European Communities' second written submission, para. 18; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 6.

rights; they reimburse Boeing for certain R&D costs incurred solely pursuant to Boeing's own will (known as "independent" R&D) rather than pursuant to the terms of a contract; and they provide facilities, equipment, and employees for LCA-related R&D.[128] The European Communities points to the following features, which it considers are evident from an examination of the R&D subsidies:

(a) The U.S. Government and Boeing have had a very close and long-standing relationship that has helped Boeing to succeed in the LCA markets.

(b) Both the U.S. Government and Boeing often admit through public statements that the LCA sector is unique in its ability to benefit from lavish government funding.

(c) Federal R&D funding and support greatly reduce the need for Boeing to finance its own R&D for developing new and improved LCA, and shift the risk of new product development to the U.S. Government.

(d) Federal R&D funding and support lead to the development of valuable technologies for Boeing's LCA division, and this technology remains with Boeing (rather than in the public domain) through IP rights and other technology transfer restrictions.[129]

In addition, the European Communities submits that the U.S. Government has provided almost $2.2 billion in export-contingent tax relief to Boeing under the FSC/ETI tax exclusion regimes that impacts the sales of Boeing LCA.[130]

(i) U.S. aeronautics R&D

4.60 The European Communities alleges that the United States has provided $13 billion to help Boeing research, develop, design, and produce its LCA families, most notably the 787, through the NASA, DOD, and DOC aeronautics R&D programmes at issue. In particular, the European Communities argues that the United States has done so through eight NASA R&D programmes, 23 DOD RDT&E programme elements[131] and the DOC Advanced Technology Program.[132]

4.61 The European Communities contends that the U.S. Government-supported aeronautics R&D has benefited all of Boeing's LCA models in the past, and will continue to benefit Boeing's LCA models in the future. Even in those instances where U.S. Government R&D support is purportedly for military aircraft technology, such support often benefits LCA technology.[133]

4.62 The European Communities goes on to explain that the U.S. LCA industry is unique among U.S. manufacturing industries in having received extensive federal government support for R&D since its inception. Robert Spitzer, the former Vice President for Engineering at Boeing's Commercial Airplane Group, has acknowledged that NASA's unique collaboration with the U.S. LCA industry "is evident in every U.S.-made aircraft". Indeed, J. F. Creedon, the former Director of NASA Langley, has stated: "(t)he reason that there is a NASA Langley and the other aeronautics centers is to

[128] Executive Summary of the European Communities' first written submission, para. 7.
[129] Executive Summary of the European Communities' first written submission, para. 8.
[130] Executive Summary of the European Communities' first written submission, para. 20.
[131] The European Communities explained in its subsequent submissions that its challenge with respect to DOD RDT&E is, and always has, related to the entire DOD RDT&E Program, and not just 23 specific Program Elements. European Communities' response to question 359, para. 163; European Communities' comments on United States' response to question 361, para. 151.
[132] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 6.
[133] Executive Summary of the European Communities' first written submission, para. 9.

contribute technology to assure the pre-eminence of U.S. aeronautics. When Boeing brings out a flagship product like the 777, that uses as many products of NASA technology as are on this plane, it reaffirms the reason that we exist and it is very gratifying to us".[134]

4.63 Thus, the European Communities submits that it has extensively analysed eight NASA aeronautics R&D programmes, 23 DOD RDT&E PEs, and eight DOC ATP projects, and established a prima facie case that this NASA, DOD, and DOC R&D support constitutes specific subsidies to Boeing's LCA division that have helped Boeing research, develop, design, and produce various members of its LCA family, most notably the 787. It maintains that the United States has not rebutted this prima facie case, as it has never addressed the European Communities evidence and argument on a measure-by-measure basis.[135]

4.64 The European Communities rejects the U.S. arguments focusing on NASA's overall mission and the military nature of DOD's RDT&E PEs as being a diversion. According to the European Communities, the evidence demonstrates that the NASA and DOD programmes actually at issue have generated valuable knowledge, experience, and confidence with respect to LCA technologies that Boeing has put to use toward its LCA. This is the case even with respect to early-stage research, as well as research on aircraft that do not on their face resemble today's LCA. Contrary to U.S. claims, key results and data from NASA/DOD-sponsored R&D are rarely published, and the little that is published does not allow Airbus to adequately leverage the results. Further, the European Communities notes that ITAR does not prevent Boeing from using DOD-supported technologies toward its LCA.[136]

4.65 With respect to the benefit from the NASA and DOD R&D contracts, as well as from the provision of IP rights, the European Communities has explained why the contracts with non-profit universities provided by the United States fail to refute the market benchmark established by the European Communities. The European Communities' benchmark is based on a variety of different sources, including a particularly relevant benchmark detailed by Ms. Regina Dieu, legal counsel for Airbus in industrial procurement, and articles authored by IP law experts on the general practice of for-profit companies.[137]

4.66 Finally, the European Communities observes that although the United States had several opportunities to provide support for the incredibly low values that it alleges were provided to Boeing's LCA division by NASA and DOD R&D support, it failed to provide any of that evidence. In particular, the European Communities contends that it is left with lists of contract numbers and dollar amounts, typed out on blank sheets of paper, without any way to precisely verify what was actually included, and more importantly, what was excluded from those lists. The European Communities, by contrast, has made a prima facie case of the subsidy values, with its meticulously supported top-down analysis, and this remains the only real evidence now before the Panel on this issue. The European Communities argues that to date, the U.S. submissions have not provided any comfort to the European Communities that anyone at NASA or DOD has actually done a thorough review of the contracts in their files.[138]

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[134] Executive Summary of the European Communities' first written submission, para. 10.

[135] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 7.

[136] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 7.

[137] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 11.

[138] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 11.

BCI deleted, as indicated **[***]**

4.67 The European Communities understands the United States to argue that neither NASA nor DOD can provide a full accounting of any of the programmes at issue in this dispute, because their computers are unable to respond to the necessary queries. The European Communities submits that the U.S. bottom-up approach cannot be relied upon, and the European Communities estimates of the financial contributions to Boeing, whether through direct transfers of funds or the provision of goods or services, continue to be the best information available to the Panel.[139]

4.68 In view of the above and based on the best information available, the European Communities maintains that the amount of the NASA, DOD, and DOC R&D subsidies to Boeing's LCA division is $13 billion and that the ongoing U.S. criticism of the top-down European Communities' approach is unfounded.[140] In contrast, the European Communities submits that the United States has provided no confidence that its bottom-up estimates capture all of the NASA and DOD contract disbursements to Boeing, as well as all of the valuable goods and services, in-house R&D support, and funding through sub-contracts provided to Boeing for LCA-related R&D.[141]

R&D support does not constitute a purchase of service

4.69 The European Communities submits that NASA and DOD R&D support constitutes a direct transfer of funds and a provision of goods and services, not a purchase of services.[142] The European Communities argues that the NASA support provides a benefit, given that no commercial entity would ever pay another entity to conduct R&D primarily for the other entity's benefit, while DOD's failure to recover a fair share of its investment in LCA-related technologies is inconsistent with relevant market benchmarks.[143]

4.70 More specifically, the European Communities claims that NASA and DOD are paying for R&D that is of exclusive benefit to the company performing the R&D, and DOD, in particular, fails to "recoup" the portion of R&D costs it pays to Boeing that relates to Boeing LCA. The European Communities argues that no company in the commercial marketplace would undertake these practices. Noting that the United States presents four contracts between Boeing and unnamed universities to illustrate that a party funding R&D does not necessarily control the resulting IP rights, the European Communities contends that presenting these contracts as examples of commercial practice is not credible, particularly in the light of Boeing's relationship with universities, which is often that of a benefactor to charitable institutions.[144] Finally, the European Communities considers that this support is specific because only entities capable of carrying out these aeronautics R&D projects receive this support, and Boeing's share is disproportionate to its economic position in the United States.[145]

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[139] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 10.

[140] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 9.

[141] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 9.

[142] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 8; Executive Summary of the European Communities' second written submission, para. 21; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 8.

[143] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 8.

[144] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 10.

[145] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 8.

4.71 The European Communities takes issue with the statement by the United States that NASA and DOD R&D contracts should be considered purchases of services, and therefore fall outside the scope of the SCM Agreement.[146] This is a remarkable argument, and one which – if accepted – would open up a hole in the SCM Agreement that would allow undisciplined subsidization without limit.[147] The European Communities elaborates that, rather than simply writing a cheque to a given company, a government could instead establish an agency with a mission to ensure the pre-eminence of the industry in which that company operates, and then have that agency enter into a "contract" with the company to provide funds in exchange for reports or license rights that it does not intend to use. (The European Communities notes that the U.S. explained during the first panel meeting that some of the "contracts" entered into by NASA are in fact "cooperative agreements", "technology investments agreements" or "other transactions". However, the United States did not explain which are involved in this case.) The European Communities submits that, regardless of the form of the transaction, the company at issue receives government funds to conduct research that the company wants to conduct for its own benefit, while the government receives nothing of any value to it. Failing to consider this form of support as a financial contribution would, in the view of the European Communities, subvert the object and purpose of the SCM Agreement, which is to discipline subsidies that distort international trade in goods.[148]

4.72 The European Communities submits that a substantive examination of the NASA and DOD contracts at issue shows that they result in direct transfers of funds and provisions of goods and services, since they convey economic resources to Boeing. If a measure properly fits into any one of the sub-paragraphs of Article 1.1(a)(1), there is a financial contribution, regardless of whether it might also constitute a purchase of services. The United States focuses on what the government receives in return for its transfers of funds and provisions of goods and services, but in doing so, deliberately confuses the distinct concepts of financial contribution and benefit, contrary to clear Appellate Body guidance in *Brazil – Aircraft*. In any event, the European Communities argues that NASA and DOD R&D subsidies are not properly characterised as purchases of services because the transactions at issue: (i) do not ultimately aim at the acquisition of a service for the direct benefit and own use of NASA or DOD; (ii) do not contain the typical elements of a purchase; (iii) do not exclusively affect trade in services, but rather are a crucial element of the production of goods – i.e. LCA and military aircraft; and (iv) are not rendered by a genuine service provider.[149]

NASA

4.73 The European Communities argues that NASA research has contributed to numerous advances applicable to LCA in areas such as aerodynamics, flight dynamics, structures and materials, flight systems, noise reduction, and operating problems, based in part on the expert analysis of Airbus engineers Dominik Wacht and Tim Sommer. Altogether, NASA has provided over $10.4 billion in support to Boeing's LCA division through the following aeronautics R&D Programs: Advanced Composites Technology ("ACT"), High Speed Research ("HSR"), Advanced Subsonic Technology ("AST"), High Performance Computing and Communications ("HPCC"), Aviation Safety ("ASP"), Quiet Aircraft Technology ("QAT"), Vehicle Systems ("VSP"), and Research and Technology Base ("R&T Base"). As the U.S. Congressional Budget Office has found: "(t)he benefits from the R&D

[146] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 13.

[147] See also, Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 8. Accepting the United States' argument that LCA-related R&D support is a purchase of services simply because it is funded through contracts would, in the view of the European Communities, create an enormous loophole in the SCM Agreement.

[148] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 13.

[149] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 8.

supported by the NASA programs in question fall almost exclusively to aircraft manufacturers, their suppliers, and airlines".[150]

4.74 The European Communities submits that among the aeronautics R&D subsidies at issue are NASA's AST Program and HSR Program, which provided over $2.3 billion for research that was deemed by NASA itself as "vital to the future of the Nation's civil aircraft industry". The European Communities asserts that much of this funding benefited Boeing's LCA division and that benefits from this funding continue today. In addition, the European Communities emphasizes that one of the policies of these programmes was to restrict the transfer of valuable information outside of the United States because, in NASA's own words, "it is critical for the United States to maintain its lead over foreign competition in aerospace technology". On this basis, the European Communities argues that these R&D subsidies were not designed for the benefit of ordinary air travellers, but instead for the benefit of the U.S. LCA industry.[151]

4.75 The European Communities also argues that the legacy of these programmes has continued in other multi-billion dollar NASA aeronautics programmes that have funded LCA-related research by Boeing, such as the HPCC Program, ASP, QAT Program, VSP and R&T Base Program.[152] Furthermore, Boeing's ability to launch its 787 Dreamliner using more than 50% composite materials was made possible through decades of funding and support provided by NASA, including through its Aircraft Energy Efficiency ("ACEE") Program and ACT Program. These programmes were focused on increasing the use of composites in LCA.[153]

4.76 The European Communities alleges that NASA's aeronautics R&D contracts (including Space Act Agreements) give rise to financial contributions because they result in both direct transfers of funds and the provision of goods and services (namely the provision of facilities, equipment, and employees).[154] Second, it claims that NASA's R&D funding and support confer a benefit on Boeing's LCA division worth $10.4 billion because NASA receives little to no value in return for the funds and goods/services it provides, contrary to the U.S. assertions. The European Communities argues that NASA is not in the business of manufacturing LCA or its parts; NASA's interests, which the United States relies on to demonstrate the value to NASA, are entirely identical to Boeing's interests for the measures at issue; and the limited NASA R&D results that are eventually disseminated to the public have little value to the companies that did not participate in the research.[155] In this regard, the European Communities makes reference to statements by Airbus engineers and a UK Government expert, Dr. Ray Kingcombe, on the difficulty of obtaining any meaningful data from published NASA reports.[156] Third, the European Communities emphasizes that the United States has not disputed the conclusion that NASA's aeronautics R&D support for Boeing is specific.[157]

4.77 The European Communities specifically rejects the United States' argument that NASA R&D support amounts to a purchase of services on the basis that, *inter alia*, its purpose is to advance the interests of the U.S. LCA industry, not provide anything of value to NASA. For example, according to NASA, "(t)he goal of the ACT program is to increase the competitiveness of the U.S. aeronautics industry by putting the commercial transport manufacturers in a position to expand the application of composites beyond the secondary structures in use today to wings and fuselages by the end of {the 1990s}". The European Communities posits that if the U.S. argument that these R&D contracts

[150] Executive Summary of the European Communities' first written submission, para. 11; European Communities' first written submission, para. 476.
[151] Executive Summary of the European Communities' first written submission, para. 12.
[152] Executive Summary of the European Communities' first written submission, para. 13.
[153] Executive Summary of the European Communities' first written submission, para. 14.
[154] Executive Summary of the European Communities' second written submission, para. 21.
[155] Executive Summary of the European Communities' second written submission, para. 23.
[156] European Communities' second written submission, para. 325.
[157] Executive Summary of the European Communities' second written submission, para. 24.

constitute purchases of services excluded from the scope of Article 1.1(a)(1) were accepted by the Panel, it would create an enormous and unintended loophole in the SCM Agreement.[158]

4.78 The European Communities considers that the United States, throughout all of its NASA-related arguments, largely ignores the mountain of evidence submitted by the European Communities illustrating how NASA funding and support has benefited Boeing's LCA division.[159] More specifically, the European Communities claims that the United States continues to put emphasis on NASA's overarching mission to expand "human knowledge" or "the global foundations of aeronautics science", instead of engaging the European Communities' arguments and evidence on a programme-by-programme level.[160]

4.79 The European Communities asks the Panel to disregard the United States' request that the Panel ignore the statements from official NASA sources as to the very purpose of the programmes challenged by the European Communities in favour of vague statements about NASA's overall mission. The European Communities contends that abstract generalizations about NASA's overall purpose do nothing to diminish the lucid objectives of the programmes that are at issue in this dispute.[161] In this context, the European Communities maintains its argument that the United States has never, on a programme-by-programme basis, defended these eight specific NASA R&D programmes. Nor can it do so, in the view of the European Communities, under the terms of the SCM Agreement. Importantly, NASA's objectives for the eight programmes at issue are indistinguishable from Boeing's objectives – i.e. "to assure the pre-eminence of U.S. aeronautics".[162]

4.80 The European Communities submits that the myriad of activities conducted by NASA is not at issue in this dispute. What is at issue, however, are eight highly specialized aeronautics R&D programmes operated by NASA that, based on clear evidence, help improve the competitiveness of U.S. LCA manufacturers – i.e. Boeing.[163] To review some of this evidence, the European Communities cites the following chart:[164]

[158] Executive Summary of the European Communities' second written submission, para. 21.
[159] Executive Summary of the European Communities' second written submission, para. 19.
[160] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 7.
[161] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 8.
[162] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 9.
[163] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 7.
[164] European Communities' second written submission, para. 318.

BCI deleted, as indicated **[***]**

Figure 2 - NASA Aeronautics R&D Programmes Helped Boeing Build LCA

NASA Programme	Statements by NASA and Boeing Illustrating Goal to Help Boeing LCA
ACT	– "The goal of the Advanced Composites Technology (ACT) program is *to increase the competitiveness of the U.S. aeronautics industry* by putting the *commercial transport manufacturers* in a position to expand the application of composites beyond the secondary structures in use today to wings and fuselages by the end of **{**the 1990s**}**."[165] – "U.S. government research funding, such as the NASA ACT program, is *crucial to helping Boeing* and other U.S. aircraft manufacturers develop advanced technology and remain competitive in world markets."[166]
HSR	– HSR aimed to "develop**{}** the technologies that *industry* needs … to establish the viability of an economical and environmentally sound High Speed Civil Transport (HSCT), a vehicle that—if built by *U.S. industry*—could provide U.S. leadership in the long-range commercial air travel markets of the next century …".[167] – "The projected High-Speed Civil Transport (HSCT) market is substantial, and successful development and production of an HSCT by foreign competitors would significantly reduce the *U.S. aerospace industry* world market share of civil transport aircraft. Technology development is essential. The NASA HSR program is being conducted in two phases with the ultimate objective of helping to assure *U.S. industry's* continued preeminence in aeronautics well into the next century by developing technology that will enable an environmentally compatible and economically viable HSCT aircraft."[168]
AST	– "NASA's objective in the Advanced Subsonic Technology (AST) program is to *provide U.S. industry with a competitive edge to recapture market share*, maintain a strongly positive balance of trade, and increase U.S. jobs."[169] – AST's Integrated Wing Design ("IWD") element aimed to "**{c}**onduct an assessment of the technology needs of the *U.S. commercial transport-aircraft industry* that would allow that industry to design and manufacture their products at significantly lower cost and less time than today".[170]
HPCC	– "The goal of the CAS project is to accelerate the development, availability and use of high-performance computing technology by *the U.S. aerospace industry* …."[171]
Aviation Safety	– "The Aviation Safety Program will emphasize rapid and effective dissemination of the **{**aviation safety**}** technology to the *U.S. industry* .... AvSP resources fund R&D contracts and grants, which help ensure direct transfer of technology to the *U.S. industry* and thus increase the likelihood of direct input into near-term products."[172]
QAT	– QAT, along with its predecessor Noise Reduction program under AST, focused on "developing noise reduction technology for *the U.S. commercial aircraft industry* to enhance its competitiveness to meet national and international environmental requirements and to facilitate market growth."[173]
Vehicle Systems	– Vehicle Systems, *inter alia*, "investigates and develops breakthrough technologies to maintain the superiority of *U.S. aircraft* …".[174]
R&T Base	– "Through basic and applied research", R&T Base developed "critical high-risk technologies and advanced concepts for *U.S. aircraft* and engine industries".[175]

[165] NASA ACT Budget Estimates, FY 1997, SAT 4-21, Exhibit EC-321, emphasis European Communities.

[166] L. Ilcewicz, et al., *Advanced Technology Composite Fuselage*, *Sixth NASA/DOD ACT Conference*, Exhibit EC-279, p. 22, emphasis European Communities.

[167] NASA HSR Budget Estimates, FY 1999, SAT 4.1-29 to 4.1-30, Exhibit EC-343, emphasis European Communities.

[168] NASA High Speed Research Program Plan, April 1998, Exhibit EC-1208, p. 1, emphasis European Communities.

[169] Harris Statement, Exhibit EC-359, p. 5, emphasis European Communities.

[170] Task Assignment No. 15, NASA Contract NAS1-20267, Integrated Wing Design, 26 July 1995 , Exhibit EC-362, emphasis added; Task Assignment No. 9, NASA Contract NAS1-20268, Integrated Wing Design, 26 July 1995, Exhibit EC-363, emphasis European Communities.

[171] HPCC Fact Sheet, Exhibit EC-372, emphasis European Communities.

[172] NASA Aviation Safety Program Program Plan, 1 August 1999, Exhibit EC-1209, p. 35, emphasis European Communities.

[173] NASA Memorandum to Research and Focused Branch , Exhibit EC-365, p. 4, emphasis European Communities.

[174] NASA Vehicle Systems Budget Estimates, FY 2003, SAT 4-23, Exhibit EC-396, emphasis European Communities.

[175] NASA R&T Base Budget Estimates, FY 1999, SAT 4.1-2, Exhibit EC-398, emphasis European Communities.

4.81 The European Communities observes that there is agreement between the United States and the European Communities that the purpose and effect of the eight NASA programmes was to improve the competitiveness of Boeing LCA. The European Communities recalls the U.S. telling admission at the first Panel meeting that Airbus never received a penny of funding from the NASA AST Program, adding that the same is true of all of the other R&D programmes that it is challenging.[176]

4.82 In response to a number of general assertions made by the United States in relation to related NASA R&D, the European Communities submits that:

- the fact that NASA's overall mission goes beyond commercial aeronautics is irrelevant to evaluating the measures at issue in this dispute;

- NASA's aeronautics R&D programmes provide a variety of benefits to Boeing's LCA development, and are not simply focused on basic research;

- the critical question is how NASA-supported R&D benefits Boeing's current and future LCA, not whether particular concept aircraft "resemble" current LCA; and

- research results from NASA aeronautics R&D programmes are often kept hidden from public view, particularly those that are especially valuable.[177]

4.83 In addition, the European Communities takes issue with a statement made by the United States that limitations on access are necessary for NASA to obtain and release information that "would otherwise remain in private hands". If the contracts carried out by Boeing were really for the purpose of NASA's mission and not for the purpose of improving Boeing's competitiveness, why would Boeing refuse release of the results, and why would NASA accept that they remain secret, through the various restrictions on access summarised in the technology overview table distributed during the Panel's second meeting with the parties? In this regard, the European Communities maintains its claim that NASA utilises taxpayer dollars to support Boeing's R&D efforts while allowing Boeing to keep and utilise the information protected by these limitations for its own benefit prior to disclosure.[178]

4.84 Finally, the European Communities points out that the United States spent much of its time defending NASA programmes that the European Communities simply is not challenging.[179] Defending measures that are not at issue, while ignoring those that are at issue, obviously does nothing to rebut the European Communities' prima facie case.[180] In this context, the European Communities clarifies that it is not challenging NASA R&D contracts related to "air traffic management and air traffic safety" and "ways to modify airplane flight paths to decrease" fuel consumption. Rather, it is challenging the eight NASA aeronautics R&D programmes that gave rise

[176] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 10.
[177] Executive Summary of the European Communities' second written submission, para. 20.
[178] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 9.
[179] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 7.
[180] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 7.

to LCA-related technologies for the benefit of the U.S. LCA industry.[181] In addition, the European Communities maintains its estimate that NASA's R&D support to Boeing's LCA division is worth $10.4 billion, given that the United States has provided no support for its lower figures. This estimate captures all funding and support for LCA-related research provided by NASA to all divisions within Boeing and McDonnell Douglas, including both direct funding and the provision of goods/services.[182]

4.85 The European Communities asserts that the United States seems to misunderstand the European Communities' methodology in that the United States continues to believe that the European Communities' methodology is aimed at determining the amount of dollars provided by NASA to Boeing. This is incorrect, as the European Communities' methodology is aimed at determining the total amount of the subsidy – i.e. the total benefit – to Boeing's LCA division.[183] Even if the United States were to demonstrate that (i) direct disbursements to Boeing for LCA-related R&D under the programmes at issue totalled $775 million, and (ii) provisions of goods and services to Boeing for LCA-related R&D through Space Act Agreements under the programmes at issue totalled $75 million, such a showing still would not be sufficient to rebut the European Communities' prima facie case that NASA subsidised Boeing in the amount of $10.4 billion, as it would not demonstrate that the remaining funding under the programmes at issue did not benefit Boeing's LCA division.[184]

DOD

DOD RDT&E Program

4.86 The European Communities asserts that almost $2.4 billion in support through contracts under the DOD RDT&E Program has also directly benefited Boeing LCA, without any requirement that Boeing repay any portion of the commercial benefits to the U.S. Government.[185] Moreover, the European Communities asserts that it, together with its aeronautics engineering experts at CRA International and Airbus, has demonstrated that Boeing utilizes technologies developed with DOD support on its LCA, particularly the 787, and that Boeing's defence work contributes significantly to the development of its LCA. Furthermore, the European Communities submits that DOD not only funds the development of technology for the U.S. LCA industry, but also pays Boeing and other companies excessive and unwarranted award and incentive fees in conjunction with their DOD-supported contracts.[186]

4.87 The European Communities claims that DOD contracts give rise to financial contributions because they result in both direct transfers of funds and the provision of goods and services (namely the provision of facilities, equipment, and employees). They are not purchases of services, but rather relate to the purchase of goods – i.e. the military aircraft and other defence systems that DOD ultimately procures. The European Communities maintains that if the U.S. argument that these R&D contracts constitute purchases of services excluded from the scope of Article 1.1(a)(1) were accepted by the Panel, it would create an enormous and unintended loophole in the SCM Agreement.[187]

4.88 The European Communities asserts that DOD's RDT&E funding and support confer a benefit on Boeing's LCA division because Boeing can utilize the R&D results and technology throughout its

[181] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 8.
[182] Executive Summary of the European Communities' second written submission, para. 22.
[183] European Communities' comments on United States' response to question 176, para. 168.
[184] European Communities' comments on United States' response to question 341, para. 82; European Communities' comments on United States' response to question 343, para. 109.
[185] Executive Summary of the European Communities' first written submission, para. 16.
[186] Executive Summary of the European Communities' first written submission, para. 16.
[187] Executive Summary of the European Communities' second written submission, para. 27.

military and civil divisions without paying DOD back for the value of R&D ultimately used toward designing and building its LCA, as any commercial entity would do. The European Communities estimates that DOD fails to recover $2.4 billion out of the total $4.3 billion in dual-use RDT&E support provided to Boeing, resulting in a benefit to Boeing's LCA division worth $2.4 billion.[188] Indeed, because what is at issue in this dispute is R&D that has both military and civil applications (i.e. dual-use research), the European Communities considers only a portion of the total dual-use DOD RDT&E support to Boeing to be a financial contribution that confers a benefit on Boeing's LCA division – namely, $2.4 billion out of a total $4.3 billion.[189]

4.89 In this context, the European Communities rejects the United States' counter-argument in which it compares Boeing's relationship with DOD to that of an attorney to a client. Using the U.S. terminology, the European Communities posits that the United States here is comparing apples to oranges. Boeing ultimately provides goods for DOD and its commercial customers, and develops valuable IP rights. Nothing comparable is generated from an attorney-client relationship – if it were, there is no doubt that market-based clients would demand something back.[190]

4.90 The European Communities recalls that until 1992, DOD attempted to recover a "fair share" or "fair price" for its contribution to commercial technology through its "recoupment policy". However, with the end of recoupment for commercial sales in June 1992, DOD no longer makes this attempt, and the U.S. LCA industry benefits from DOD-funded research while paying nothing in return. [191]

4.91 Finally, the European Communities argues that DOD's RDT&E Program is specific within the meaning of Article 2.1(a) because DOD explicitly limits access to RDT&E to only those entities capable of carrying out the types of activities enumerated in DOD's regulations, and because each of the PEs at issue was explicitly limited to a group of enterprises. Further, DOD's RDT&E Program is also specific within the meaning of Article 2.1(c) because Boeing, as well as four other top U.S. aerospace companies, have received a share of DOD RDT&E support that is not proportionate to their share of the U.S. economy – i.e. the jurisdiction of the granting authority.[192]

4.92 The European Communities notes that the United States makes a number of general assertions in its attempt to contest the European Communities' prima facie case that DOD provides specific subsidies to Boeing's LCA division through its RDT&E Program. The European Communities addresses those general assertions by explaining that:

- DOD RDT&E PEs have given rise to LCA-related technologies, regardless of their purported military purpose;

- DOD's dual-use research does not leverage only commercial technology for military use;

- differences between military and civil aircraft do not make it impossible for DOD-supported technologies to be applied toward LCA; and

[188] Executive Summary of the European Communities' second written submission, para. 29.
[189] Executive Summary of the European Communities' second written submission, para. 25.
[190] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 12.
[191] European Communities' first written submission, paras. 669, 671.
[192] Executive Summary of the European Communities' second written submission, para. 30.

BCI deleted, as indicated **[***]**

- ITAR controls do not prevent Boeing from using military technology toward its LCA.[193]

4.93 Next, the European Communities addresses the United States' assertion that a number of the DOD contracts at issue were awarded to Boeing after competitive bidding. According to the United States, such bidding creates "competitive pressure" on Boeing to offer the lowest possible price, and this price would be lower when Boeing recognizes that benefits to its LCA division could arise from performing the contract. The European Communities questions what "competitive bidding" means where overall remuneration is based on costs (even when the contract goes over the estimated budgets) rather than the value of the product. The European Communities again asserts that the United States attempts to assume away the benefit of R&D subsidies with unsupported assertions, this time about the impact of competitive bidding. Moreover, the European Communities expresses no surprise about the fact that other companies are interested in receiving DOD RDT&E funding given the generous terms upon which they are granted, including the provision of IP to the recipient of the funds, and the reimbursement of IR&D/B&P costs. Although it is outside the scope of this dispute, the European Communities posits that many of these contractors likely receive the same type of subsidies that Boeing receives. For example, even if a recipient of DOD RDT&E funds does not have significant sales in the commercial market, it could profit through charging license fees to other companies that do need the DOD-funded patents provided to the contractor.[194]

4.94 The European Communities submits that it has provided a wealth of evidence and expert reports on how Boeing benefits from the DOD RDT&E subsidy programme. The United States, in the European Communities' view, was unable to answer any of the European Communities' questions on this topic during the Panel meeting with the parties, such as the question regarding Boeing's use of C-17 technology on its LCA. What the United States did do, however, was to hide behind the military purpose of the programmes. The European Communities considers that this purpose is irrelevant to the aspect of DOD RDT&E support at issue in this dispute – namely the portion of this support that benefits Boeing's commercial division. The European Communities considers that the United States also hid behind the phrase "weapons systems" without revealing until direct questioning that an aircraft can be called a "weapons system". The European Communities recognizes that all of these are interesting tactics, but they fail to address the claims made by the European Communities in this dispute.[195]

4.95 Finally, the European Communities maintains its estimate that DOD's dual-use RDT&E support to Boeing's LCA division is worth $2.4 billion, as the United States has provided no support for its lower figures. This estimate captures the value of both direct funding and the provision of goods/services.[196]

[193] Executive Summary of the European Communities' second written submission, para. 26.
[194] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 13.
[195] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 12.
[196] Executive Summary of the European Communities' second written submission, para. 28.

BCI deleted, as indicated **[***]**

DOC

DOC Advanced Technology Program

4.96 The European Communities further argues that U.S. DOC has provided support to Boeing that particularly benefits the development of the 787.[197] The DOC's ATP is designed to improve the competitive position of U.S. industry by supporting industry-led R&D projects.[198]

4.97 The European Communities argues that the United States has not successfully contested the European Communities' prima facie case that the eight ATP projects, through which the U.S. DOC has provided funding (in the form of grants) and support to Boeing for LCA-related research, constitute actionable subsidies.[199] The U.S. principal arguments relate to financial contribution and specificity, but, according to the European Communities, these arguments fail.[200] In particular, the U.S. assertion that the financial contributions from these projects are not as high as the European Communities claims lacks support. Further, the European Communities submits that the U.S. argument that ATP is not specific fails because: (i) ATP is explicitly limited to groups of industries or enterprises that engage in R&D related to "high risk, high pay-off, emerging and enabling technologies"; (ii) the eight ATP projects at issue were explicitly limited to a select group of enterprises that could perform the narrow scope of the research; and (iii) the predominant users of ATP are enterprises engaged in researching "high risk, high pay-off, emerging and enabling technologies".[201]

(ii) NASA/DOD intellectual property right waivers/transfers

4.98 In addition to the above, the European Communities also claims that NASA and DOD have waived and/or transferred valuable patent and other IP rights to Boeing, without any demand for payment or license fees. Boeing is free to use the patented technologies for itself, or to license them to others for profit.[202]

4.99 Moreover, the transfer of valuable IP rights to Boeing is inconsistent with the stated objective of creating technology and knowledge that can serve the public good, but consistent with Boeing's economic interests.[203]

4.100 The European Communities contends that NASA and DOD have waived and/or transferred, at a minimum, hundreds of millions of dollars worth of valuable IP rights to Boeing, including patents, rights to trade secrets, and data rights, with the valuation thereof based on the expert analysis of CRA International. The patents at issue did not belong to Boeing "in the first place", and as such, their waiver/transfer to Boeing constitutes a financial contribution that confers a benefit. The European Communities submits that the United States cannot avoid the disciplines of the SCM Agreement by simply providing these subsidies pursuant to so-called "contracts". It also submits that these waivers/transfers are specific since only companies capable of conducting

[197] Executive Summary of the European Communities' first written submission, para. 19.
[198] Executive Summary of the European Communities' first written submission, para. 19.
[199] Executive Summary of the European Communities' second written submission, para. 31; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 11.
[200] Executive Summary of the European Communities' second written submission, para. 31.
[201] Executive Summary of the European Communities' second written submission, para. 32; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 11.
[202] Executive Summary of the European Communities' first written submission, para. 17.
[203] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 9.

NASA/DOD R&D activities are eligible to receive them, and since Boeing's share is disproportionate in the light of its economic position in the United States.[204]

4.101 The European Communities argues that the United States fails to counter the European Communities' arguments[205], and instead tries to defend the practice of NASA and DOD through unsupported assertions, misleading statements about the relevant laws and regulations, and references to aspects of NASA and DOD laws and regulations that the European Communities has not even challenged. Moreover, in the European Communities' view, the U.S. arguments, particularly with respect to specificity, focus on issues and practices that are not relevant to the legal analysis required by the SCM Agreement.[206]

4.102 The European Communities maintains that the United States fails to successfully contest the European Communities' argument that NASA and DOD IP right waivers/provisions result in financial contributions. Most important, in the European Communities' view, is the fact that the United States focuses on a portion of the U.S. patent law that does not apply here. The European Communities submits that the relevant U.S. laws make it clear that inventions made pursuant to a NASA contract belong to the U.S. Government unless waived by NASA, and inventions made pursuant to a DOD contract may be retained by the contractor unless DOD decides otherwise. As such, the European Communities submits that by waiving/providing patent rights to Boeing, NASA and DOD make financial contributions.[207]

4.103 The European Communities further argues that the U.S. argument that IP right waivers/provisions confer no benefit also fails because it is based on the U.S. incredible assertion that one cannot challenge as a subsidy any financial contribution that is included as part of something deemed by the government as a "contract". The European Communities contends that this assertion is unsustainable. The European Communities argues that commercial practice illustrates that an entity funding R&D typically retains the full IP rights that result. This confirms that providing Boeing with IP rights, in addition to the funding and support necessary to conduct the R&D, results in a benefit to Boeing.[208]

4.104 The European Communities reiterates its proposition that, in a market transaction, IP rights would normally be under the control of the party funding the R&D (in this case NASA and DOD), and no company would provide IP to another company to "improve the position of the United States in world trade", or to promote "new technology for commercial purposes" of the recipient of the R&D funds. According to the European Communities, the United States simply assumes away the value of this benefit by arguing that NASA or DOD would never provide IP to Boeing through an R&D contract without also requiring Boeing to pay for that IP pursuant to another aspect of that contract, but it provides absolutely no evidence for this remarkable conclusion.[209]

4.105 Finally, the European Communities rejects the U.S. attempt to defend NASA and DOD IP right waivers/provisions as not specific pursuant to Article 2.1(a) of the SCM Agreement as being

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[204] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 9; Executive Summary of the European Communities' second written submission, para. 33; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 12.

[205] Executive Summary of the European Communities' second written submission, para. 33; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 12.

[206] Executive Summary of the European Communities' second written submission, para. 33.

[207] Executive Summary of the European Communities' second written submission, para. 34.

[208] Executive Summary of the European Communities' second written submission, para. 35.

[209] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 13.

fundamentally flawed, as the United States ignores the fact that the relevant granting authorities are NASA and DOD, not the United States as a whole. Moreover, these IP right waivers/provisions are also specific pursuant to Article 2.1(c) because Boeing has received a share of NASA and DOD IP right waivers/provisions that is disproportionate to its share of the U.S. economy – i.e. the jurisdiction of the granting authorities at issue.[210]

(iii) NASA/DOD IR&D/B&P Program

4.106 The European Communities submits that NASA and DOD pay a select group of aerospace and defence contractors, including Boeing, for their incurred independent research and development ("IR&D") expenditure and for their bid and proposal ("B&P") costs.[211] In particular, the European Communities submits that over $3.1 billion in IR&D and B&P funding provided by NASA and DOD, a highly secretive programme of the U.S. Government, have further allowed Boeing to develop its LCA at government expense. Noting that DOD has explained that primary control of IR&D activities "rests with the contractors, who are free to determine both the amount and focus of their IR&D activities", the European Communities points out that a study conducted for the DOD found that companies can be reimbursed for IR&D expenses for "work on technologies that were potentially of no interest to the Department of Defense".[212]

4.107 The European Communities emphasizes that the financial contribution to Boeing's LCA division from IR&D and B&P reimbursements is worth approximately $3.1 billion based on the expert analysis of CRA International[213], and the United States has not contested this European Communities' estimate.[214] It further observes that the United States offers no evidence about what Boeing has done, and continues to do, with these reimbursements. The European Communities submits that it is clear that a market entity would neither provide nor seek to provide reimbursement for these types of independently-incurred costs.[215]

4.108 The European Communities rejects the U.S. argument that IR&D/B&P reimbursements confer no benefit because this argument is again based on the incredible assertion that one cannot demonstrate benefit for any financial contribution that is included as part of something deemed by the government as a "contract".[216]

4.109 Clarifying its claims that IR&D/B&P reimbursements involve a direct transfer of funds from NASA and DOD to Boeing, and therefore result in financial contributions within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement, the European Communities explains that, whether the IR&D/B&P costs are reimbursed through a contract for goods or services is completely irrelevant.[217] With respect to benefit, the European Communities' position is that an entity operating pursuant to market considerations would not agree, and would certainly not actively seek out, to reimburse independently-incurred costs of companies (as does DOD) because those costs "(e)nhance the industrial competitiveness of the United States" or "(s)trengthen ( ) the … technology base of the United States". William Keevan, a well-known expert in IR&D accounting rules, explains that Boeing is able to receive IR&D/B&P reimbursements that fund R&D applicable to LCA

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[210] Executive Summary of the European Communities' second written submission, para. 36.

[211] European Communities' first written submission, para. 857.

[212] Executive Summary of the European Communities' first written submission, para. 18.

[213] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 10; Executive Summary of the European Communities' second written submission, para. 38.

[214] Executive Summary of the European Communities' second written submission, para. 38.

[215] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 10.

[216] Executive Summary of the European Communities' second written submission, para. 39.

[217] Executive Summary of the European Communities' second written submission, para. 38.

development, confirming that NASA and DOD IR&D/B&P reimbursements confer a benefit on Boeing's LCA division.[218]

4.110 The European Communities next notes that the United States' assertion that "IR&D costs will be reimbursed only to the extent of the military benefit of the research" lacks support, and is contradicted by Mr. Keevan. The logical implication from the total lack of evidence about Boeing's use of IR&D/B&P funds is that there is no such evidence available to rebut the European Communities' claims.[219]

4.111 Finally, the European Communities argues that the United States fails to adequately address the European Communities' evidence and argument that NASA and DOD IR&D/B&P reimbursements are specific within the meaning of Articles 2.1(a) and 2.1(c) of the SCM Agreement. The European Communities asserts that the United States again ignores the fact that the relevant granting authorities are NASA and DOD, not the entirety of the U.S. Government. The European Communities also points out that the United States fails to recognize that Boeing has received a share of NASA and DOD IR&D/B&P reimbursements that is disproportionate to its share of the U.S. economy – i.e. the jurisdiction of the granting authorities at issue.[220]

4.112 More generally, the European Communities observes that with respect to its argument that IR&D/B&P reimbursements constitute a specific subsidy, the United States repeats its basic approach, i.e. stating that evidence exists contrary to the European Communities' evidence and argument, but failing to provide that other evidence. For example, in response to the European Communities' evidence demonstrating benefit, the United States argues that IR&D/B&P reimbursements are part of "an integrated term of a contractual bargain", and that the Panel should therefore assume that no benefit could possibly result. But it provides absolutely no evidence from contract negotiations with Boeing to support this contention, evidence that is uniquely in the possession of the U.S. Government.[221]

4.113 In conclusion, the European Communities submits that it has provided evidence and legal arguments demonstrating that Boeing has received billions of dollars in subsidies through the NASA/DOD IR&D and B&P reimbursements, which the United States has not successfully contested. It also points to the fact that the United States does not deny that Boeing receives billions of dollars in IR&D/B&P reimbursements from NASA and DOD[222], but asserts that these reimbursements "have none of the attributes of a subsidy". In contrast, the European Communities considers that the U.S. response suffers from a complete lack of evidence about what Boeing has done, and continues to do, with the billions of dollars in IR&D/B&P reimbursements received from NASA and DOD for research that the United States admits neither NASA nor DOD requested Boeing to do. Instead, the United States relies almost exclusively on statements and interpretations about the laws and regulations related to IR&D/B&P that are misleading and/or incorrect. In the few instances where Boeing has apparently revealed something related to its IR&D/B&P practices for purposes of this dispute, the European Communities contends that such revelations are generally left completely unsupported.[223]

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[218] Executive Summary of the European Communities' second written submission, para. 39.

[219] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 14.

[220] Executive Summary of the European Communities' second written submission, para. 40.

[221] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 2.

[222] Executive Summary of the European Communities' second written submission, para. 37; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 14.

[223] Executive Summary of the European Communities' second written submission, para. 37.

(iv) NASA/DOD facilities, equipment and employees

4.114 The European Communities claims that NASA provides goods and services, within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement, to Boeing for LCA-related research and that NASA receives less-than-adequate remuneration for the goods and services it provides, which results in a benefit to Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement. NASA provides these goods and services in conjunction with the various contractual instruments (i.e. Space Act Agreements and other contracts) it enters into with Boeing under the eight NASA aeronautics R&D programmes challenged in this dispute, and the terms of those contractual instruments, as well as the objectives of NASA and the particular programmes at issue, make clear that NASA receives less-than-adequate remuneration in return.[224]

4.115 The European Communities uses the term "facilities, equipment, and employees" as a shorthand to describe the types of goods and services provided by NASA.[225] For example, the European Communities argues that Boeing and NASA employees have worked closely together in integrated teams to create technologies for Boeing's LCA, with the personnel costs for highly skilled NASA and Boeing employees being paid by the U.S. Government.[226]

4.116 The European Communities also claims that in conjunction with various contractual instruments entered into pursuant to the DOD RDT&E Program, DOD provides goods and services (in the form of facilities, equipment, and employees) to Boeing for dual-use R&D, a portion of which relates to LCA, resulting in financial contributions within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement. With respect to these financial contributions, the European Communities establishes – on the basis of the factual aspects of the DOD RDT&E programme, including elements of the contractual instruments and the lack of DOD "recoupment" – that when Boeing utilises resulting technology and lessons toward its development of LCA, DOD receives virtually no value, meaning that the portion of the financial contribution allocable to LCA is a benefit to Boeing within the meaning of Article 1.1(b).[227]

4.117 The European Communities further argues that the provision of facilities, equipment, and employees by NASA and DOD is specific within the meaning of Article 2.1(a) of the SCM Agreement, or alternatively within the meaning of Article 2.1(c), for the same reasons that NASA's and DOD's aeronautics R&D subsidies, through which they provide this support, are specific.[228]

(v) DOL 787 worker training grants

4.118 The European Communities claims that U.S. DOL has provided support to Boeing that particularly benefits the development of the 787.[229] The primary target of the DOL's training grant was development of the workforce necessary for developing and building the 787.[230]

4.119 The European Communities further argues that the United States has failed to show that the grant awarded by DOL to Edmonds Community College is not a specific subsidy for Boeing's benefit under the terms of the SCM Agreement. This grant constitutes a financial contribution within the meaning of Article 1.1(a)(1)(i). Further, the United States' assertion that Edmonds Community College used this grant to develop curriculum that provides no benefit to Boeing is without support,

[224] European Communities' response to question 148, para. 171.
[225] European Communities' response to question 148, para. 172.
[226] Executive Summary of the European Communities' first written submission, para. 15.
[227] European Communities' response to question 156, para. 233.
[228] European Communities' first written submission, para. 901.
[229] Executive Summary of the European Communities' first written submission, para. 19.
[230] Executive Summary of the European Communities' first written submission, para. 19.

and contrary to the evidence that clearly indicates this grant was used to train Boeing's 787 workers, thereby conferring a benefit on Boeing's LCA division. Finally, this grant was explicitly limited to the aerospace industry (i.e. Boeing and Boeing's aerospace suppliers), and is therefore specific.[231]

(vi) FSC/ETI

4.120 The European Communities claims that the U.S. Government has provided almost $2.2 billion in export-contingent tax relief to Boeing under the FSC and ETI regimes that impacts the sales of Boeing LCA, based on the expert analysis of International Trade Resources LLC. These infamous subsidies, which have repeatedly been found by panels and the Appellate Body to constitute WTO-incompatible export subsidies, appear certain to continue to accrue to Boeing for the foreseeable future despite their purported "repeal" by the U.S. Congress.[232]

4.121 Noting that the United States agrees that the FSC/ETI tax breaks are specific subsidies to Boeing's LCA division worth over $2 billion[233], the European Communities argues that the United States' claim that Boeing ceased to receive any benefit from these subsidies after 31 December 2006, has no merit, as it is based entirely on language in Boeing's 2006 Annual Report, which, the European Communities contends, is not dispositive of Boeing's post-2006 FSC/ETI intentions.[234]

4.122 The European Communities rejects the United States' claim that Boeing will not take advantage of these subsidies after 2006 as being without support, as it is based entirely on a statement in Boeing's 2006 annual report that is not dispositive of whether Boeing may or may not claim FSC/ETI tax breaks after 2006.[235] According to the European Communities, this assertion by the U.S. is not supported by any credible evidence, such as a sworn affidavit or a copy of Boeing's tax return stating that Boeing has not claimed, and will not claim, available FSC/ETI tax benefits after 2006.[236] In fact, the European Communities regards as glaringly absent from the U.S. submission, a certified and enforceable statement from a Boeing official stating that regardless of the interpretation issued by the IRS in its December 2006 Memorandum, Boeing will disclaim all FSC/ETI tax breaks after 2006.[237]

4.123 In response to the U.S. argument that the TIPRA is a "future measure", the European Communities argues that its panel request expressly covers TIPRA for purposes of this dispute. More fundamentally, the European Communities does not challenge TIPRA, but rather the FSC/ETI measures to the extent that they provided, and continue to provide, subsidies to Boeing.[238]

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[231] Executive Summary of the European Communities' second written submission, para. 41.

[232] Executive Summary of the European Communities' first written submission, para. 20.

[233] The European Communities considers that the United States agrees that the FSC and extraterritorial income tax breaks, as maintained through the FSC Repeal and Extraterritorial Income Exclusion Act of 2000 ("ETI Act"), American Jobs Creation Act of 2004 ("AJCA"), and TIPRA, are specific subsidies to Boeing's LCA division. Executive Summary of the European Communities' second written submission, para. 43.

[234] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 11.

[235] Executive Summary of the European Communities' second written submission, para. 43.

[236] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 15.

[237] Executive Summary of the European Communities' second written submission, para. 43.

[238] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 16.

(d) United States' rebuttal

4.124 Overall, the European Communities argues that the U.S. arguments, as expressed in its first written submission and oral statements before the Panel, contain serious deficiencies. In particular:

(a) The United States simply ignores many of the arguments and much of the detailed evidence provided by the European Communities.

(b) When the United States does respond, it often makes assertions or provides figures without submitting any source information or supporting evidence.

(c) In many areas, the United States advances legal interpretations of the SCM Agreement that, if accepted, would value form over substance, permit modes of subsidization that would violate the object and purpose of the SCM Agreement, and provide Members with a roadmap on how to subsidize their industries without interference by WTO disciplines.

(d) In several cases, the United States advances erroneous and sometimes absurd interpretations of the measures at issue, including interpretations that would render a number of the measures meaningless.

(e) The United States often tries to confuse the Panel by examining a measure or granting authority different from the one actually at issue, or it tries to distract the Panel by raising points that are completely immaterial.

(f) The United States argues without support that the $24 billion in subsidies to the U.S. LCA industry had no impact on Boeing's commercial behaviour.

(g) The United States simply denies that NASA and DOD R&D subsidies provided Boeing with knowledge, experience, and confidence in applying key innovative technologies, including those required for building a composite wing and fuselage for the 787; it makes these denials in spite of numerous admissions (outside the context of this dispute) regarding Boeing's use of NASA- and DOD-supported R&D results, as well as the significant confirming evidence provided by the European Communities.

(h) The United States ignores the fact that Boeing has received millions of dollars in U.S. subsidies per aircraft, allowing Boeing to price down its products.[239]

2. Arguments of the United States

(a) General overview of arguments relating to the existence of subsidies and burden of proof

4.125 The United States recalls that establishing the existence of a subsidy requires proof that there is a financial contribution, that it confers a benefit, and that the benefit is specific. Article 1.1(a)(1) of the SCM Agreement defines four categories of financial contribution.[240] A financial contribution exists only if a government or public body performs one of the actions listed in Article 1.1(a).[241]

[239] Executive Summary of the European Communities' second written submission, para. 2. See also, Executive Summary of the European Communities' second written submission, para 4.

[240] Executive Summary of the United States' first written submission, para. 6.

[241] Executive Summary of the United States' second written submission, para. 5.

4.126 The United States further asserts that Articles 1 and 2 of the SCM Agreement require an individualized assessment of each alleged financial contribution because they set out a series of steps for establishing the existence of a specific subsidy. The United States contends that these provisions clearly require that this analysis occur separately with regard to each financial contribution, rather than grouped together. The European Communities, however, attempts to dispense with this individualized treatment by grouping together different alleged financial contributions provided by different government entities and treating them as if they were the same type of contribution. In so doing, the United States argues, it fails to provide a prima facie case with regard to any of the alleged subsidies.[242]

4.127 The United States adds that this combination of multiple different financial contributions and disregard for the distinct standards for determining a benefit for each appears over and over again in the European Communities' submission. It is also not the analysis required by the SCM Agreement. The United States notes that Article 1 of the SCM Agreement is drafted in the singular. Article 1.1(a) provides that "a subsidy shall be deemed to exist if: there is a financial contribution . . . ". Article 1.1(b) then specifies that "a subsidy" exists with regard to "a financial contribution" if "a benefit is thereby conferred". Article 1.2 then specifies that "a subsidy" is subject to Part III only if "such a subsidy is specific in accordance with the provisions of Article 2". This drafting clearly envisages a separate analysis of each alleged financial contribution.[243] The United States therefore submits that the European Communities' approach is completely at odds with the structure of Article 1.1 and the guidance for determination of a benefit provided under Article 14, which presupposes a precise identification of the type of financial contribution at issue. As a general matter, a party fails to establish the existence of a subsidy if it does not establish the existence of a benefit and specificity separately with regard to each type of alleged financial contribution.[244]

4.128 If a measure does not fall within those categories, it is not a subsidy for purposes of the SCM Agreement. In this regard, the United States observes that it considers it is noteworthy that Article 1.1(a)(1)(iii) of the SCM Agreement covers only situations in which "a government provides goods or services other than general infrastructure, or purchases goods". The exclusion of purchases of services from this definition is clear: (i) services are explicitly mentioned with respect to government provisions but not purchases, and, (ii) the final version of the SCM Agreement eliminated an explicit reference to purchase of services contained in earlier drafts.[245] This limitation on the definition of "financial contribution" in the United States' view, must be given effect by excluding government purchases of all services from treatment as a financial contribution.[246] Thus, based on the

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[242] Executive Summary of the United States' second written submission, para. 6.

[243] Executive Summary of the United States' second written submission, para. 7.

[244] Executive Summary of the United States' second written submission, para. 8.

[245] Executive Summary of the United States' first written submission, footnote 7. Draft Text by the Chairman, MTN/GNG/NG10/W/38/Rev.2 (27 November 1990) (Cartland III) ("For the purpose of this Agreement, a subsidy shall be deemed to exist if … a government provides goods or services other than general infrastructure, or purchases goods or services …"). The United States notes that, under Article 32 of the Vienna Convention on the Law of Treaties, "recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31."

[246] Executive Summary of the United States' first written submission, footnote 8. The drafters were, in general, clear that they intended a limited universe of government measures to be considered financial contributions. Panel Report, *US – Export Restraints*, para. 8.69 ("Obviously, Article 1 as ultimately adopted incorporates the requirement of a financial contribution by a government or other public body as a necessary element of a subsidy. The submissions by participants to the negotiations suggest that the proponents' purpose behind including this element was to limit the kinds of government actions that could fall within the scope of the subsidy and countervailing measure rules.").

definition of "purchase", when the government confers something of value in exchange for the recipient supplying a service, there is no financial contribution.[247]

4.129 According to the United States, the European Communities appears to take the position that Article 1.1(a) of the SCM Agreement should be interpreted expansively so as to cover all potential government contributions and to eliminate "loopholes". This view is at odds with the Appellate Body's recognition, based on the negotiating history of the SCM Agreement, that "the requirement of a financial contribution from the outset was intended by its proponents precisely to ensure that not all government measures that conferred benefits could be deemed to be subsidies". The European Communities' view is also at odds with the structure of Article 1.1, which states that a subsidy exists if there is a financial contribution and which provides a list (preceded by "i.e." meaning "*id est*" or "that is") of actions that are financial contributions. This structure, the omission of a residual (or "all others") category, and the absence of any indication that the listed items are "examples" rather than definitions, indicates that the financial contributions defined in Article 1.1 are a closed list. On this basis, the United States submits that to make a prima facie case of subsidization, the complaining party must establish that the alleged subsidy falls into one of the four enumerated categories of financial contribution.[248]

4.130 The United States further recalls that whether a financial contribution confers a benefit depends on whether it provides treatment more favorable than is available on the market. The treatment is evaluated from the perspective of the recipient, and not from the cost to the government of providing the financial contribution. A financial contribution given to one entity may not be treated as a subsidy to another, unrelated entity unless the complaining party establishes that it "passed through" to the other entity.[249]

4.131 In addition, the United States contends that under the SCM Agreement, to prevail on its actionable subsidy claims, the European Communities must establish: (i) that a specific subsidy or subsidies exist; (ii) that one of the conditions listed in Article 6.3 of the SCM Agreement – in this case, displacement or impedance, significant price suppression, or lost sales – has occurred; and (iii) that the condition is the "effect of the subsidy". The Appellate Body has found that this last step requires demonstration of a "causal link" between the alleged subsidy and the conditions referenced in Article 6.3, which must ensure that the effects of factors other than any subsidies are not attributed to the subsidies. The United States submits that the European Communities has not met any of these requirements.[250]

4.132 According to the United States, the European Communities' response to the grave flaws with its prima facie case is to ask the Panel to ignore the evidence. The European Communities' repeatedly cites the same few statements by a few government officials and Boeing personnel, or a few documents, and asks the Panel to disregard the mass of evidence as to the substance of the measures and what the relevant states and agencies actually do. The United States argues that it is not asking the Panel to ignore the evidence cited by the European Communities, or to give extra credence to its evidence as "the best information available". Rather, the United States notes that the Panel will do what Article 11 of the DSU requires, namely, make "an objective assessment of the facts of the case, and the applicability of and conformity with the relevant covered agreements". Such an assessment

[247] Executive Summary of the United States' first written submission, para. 6.
[248] Executive Summary of the United States' second written submission, para. 5.
[249] Executive Summary of the United States' first written submission, para. 7.
[250] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 1.

will show that the evidence, when viewed in its full context, demonstrates that the European Communities' claims are baseless.[251]

4.133 Turning to the issue of the burden of proof, the United States notes that at several places the European Communities either misstates or attempts to shift the burden of proof. For example, in its first oral statement, the European Communities asks "{i}s it reasonable to assume, as the United States would like you to do, that such subsidies could have no effect on Boeing's competitive behavior? We think not". The United States raises this as an initial matter because it is well established that in WTO dispute settlement "the burden of proof rests on the party that asserts the affirmative of a claim or defense" to put forward "adequate legal arguments and evidence" to "establish{} a prima facie case". A prima facie case is, in turn, one "which, in the absence of effective refutation by the defending party, requires a panel, as a matter of law, to rule in favour of the complaining party". The Appellate Body recently observed that these principles "imply that a responding party's measure will be treated as WTO-consistent unless proven otherwise".[252] Noting that the European Communities recognizes in its first written submission that "the initial burden of proving a violation is on the complaining party, which must establish a prima facie case", the United States argues that much of the European Communities' subsequent argumentation, however, is inconsistent with this principle.[253] The United States contends that the burden of proof is that it is not for a panel "to assume" anything at all about a Member's measures. To the contrary, the burden of proof requires the complaining party to furnish proof of the assertions it makes in support of its claim. To proceed otherwise improperly shifts the burden of proof to the responding party.[254]

4.134 In its second written submission, the United States submits that it demonstrates that the European Communities has yet to make a prima facie case that the measures it challenges constitute financial contributions, confer a benefit, or are specific as those terms are defined under the SCM Agreement. Moreover, in the United States' view, the European Communities has not demonstrated that any of the measures are contingent on export performance. Finally, the European Communities has not demonstrated that Airbus is experiencing any "adverse effects" as a result of any of the measures. In fact, Airbus is not experiencing any adverse effects as that term is defined under the SCM Agreement. The United States alleges that the difficulties of which the European Communities complain are the result of Airbus's own commercial choices.[255]

(b) State support measures

(i) State of Washington and municipalities therein

State and Local Tax Incentives

4.135 With respect to the Washington State measures, the United States first explains that the State of Washington is a major center for aerospace development and production. Noting that for many years prior to 2007 aerospace manufacturing activities faced one of the highest effective tax rates in the State of Washington, the United States submits that the State sought to alleviate the concerns of aerospace manufacturers by enacting an aerospace tax package, the most significant component of which was a reduction in the tax rate of Washington's Business and Occupation ("B&O") tax for aerospace manufacturing activities. The United States goes on to argue that the B&O tax rate reduction served to bring the aerospace manufacturing effective tax rate closer to (but still higher

[251] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 2.
[252] Executive Summary of the United States' second written submission, para. 2.
[253] Executive Summary of the United States' second written submission, para. 3.
[254] Executive Summary of the United States' second written submission, para. 4.
[255] Executive Summary of the United States' second written submission, para. 1.

than) the average effective tax rate of other business activities in the State and that it does not provide a subsidy at all, let alone to Boeing, as the European Communities claims.[256]

4.136 The United States argues that contrary to the European Communities' claim, the B&O tax reduction is not a financial contribution to Boeing under Article 1.1(a)(1) of the SCM Agreement because the State of Washington has not foregone any revenue that is "otherwise due" – a determination that is made with reference to the State's own tax system. It explains that in Washington's activities-based tax system, various business activities have different tax rates within a certain range. The tax rate reduction for aerospace manufacturing is part of Washington's regular adjustment of its tax rates and falls within the range of tax rates for other activities. The United States submits that as such, it is not revenue foregone that is otherwise due. An examination of the State of Washington's effective tax rate confirms this conclusion. Even with the B&O tax rate reduction, the United States posits that the average effective tax rate for aerospace manufacturing remains higher than the average effective tax rate for all businesses in the State, due to "pyramiding" of the B&O tax – i.e. the taxation of goods at each stage in the production process.[257]

4.137 The United States further clarifies that the effect of the Washington State B&O tax adjustment is to bring the tax rate for aerospace manufacturing into line with the average tax rate for all business activities in the State of Washington. Without the adjustment, the effective tax rate on aerospace manufacturing is significantly higher than other business activities in the state, because of pyramiding. Since the B&O tax rate does not confer a preferential rate on Boeing, the state is not foregoing revenue that would otherwise be due. Thus, there is no financial contribution. The United States contends that the European Communities' claim fails on this basis alone. However, even if the Panel were to find that there is a financial contribution, the B&O tax adjustment is not specific to an industry or enterprise because several industries in Washington state also receive a B&O tax adjustment.[258]

4.138 The United States notes that the European Communities does not challenge only the tax reduction to Boeing, rather, it contends that tax reductions to Boeing's unrelated suppliers are in fact a benefit to Boeing. Based on this understanding the United States posits that, assuming *arguendo* that the B&O tax rate reduction for aerospace manufacturing is a financial contribution, the European Communities has provided no basis to believe that the tax rate reductions to other unrelated and independent aerospace manufacturers pass through to Boeing.[259] Specifically, the United States and its expert Dr. Dorman pointed out that the economic theory on which the European Communities' claim of pass-through rests does not reflect the factual circumstances of the markets at issue or competition from non-Washington State suppliers. And, the European Communities continues to fail to point to any other basis for a pass-through finding.[260]

4.139 In its further written submissions the United States maintains that the European Communities has failed to establish that the Washington State B&O tax adjustment at issue in this dispute results in revenue foregone to the State of Washington. The United States contends that, in asserting this argument, the European Communities errs in classifying the B&O tax rate for aerospace manufacturing as an exception to a general rule of taxation in Washington State. The baseline for the Panel's analysis of revenue foregone in this dispute is the Washington State B&O tax regime, which consists of a range of different individual rates to different business activities. In the light of the multi-rate tax system established by the State, the adjustment of the B&O tax rate to a rate that is

[256] Executive Summary of the United States' first written submission, para. 38.
[257] Executive Summary of the United States' first written submission, para. 39.
[258] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 8.
[259] Executive Summary of the United States' first written submission, para. 40.
[260] United States' response to question 234, para. 423.

comfortably within the range of all B&O tax rates is consistent with the treatment of legitimately comparable income in Washington. In addition, there is no rational basis for using the .484 per cent B&O tax rate for manufacturers as the benchmark for analyzing revenue foregone rather than the multi-rate system because the .484 per cent rate is just one rate in a multi-rate system. The United States submits that in the context of the Washington State B&O tax system, applying an individual tax rate for a particular business activity is comparable to treatment of other legitimately comparable income. [261]

4.140 As the United States detailed in its first written submission, the implications of the tax adjustment on the effective rate for aerospace also demonstrate that the B&O tax rate for aerospace is consistent with the tax treatment afforded to comparable income by Washington State and therefore does not result in revenue foregone. The adjustment of the nominal B&O tax rate served to bring the effective tax rate for aerospace manufacturing within the range of effective tax rates for other business activities in the State. This, in the view of the United States, further supports the conclusion that the adjusted rate does not constitute revenue foregone under Article 1.1(a)(1)(ii).[262]

4.141 Even aside from the fact that the B&O tax adjustment does not result in revenue foregone, the United States argues that the B&O tax adjustment is not specific. The European Communities' argument that the B&O tax adjustment is specific because the measure that should be analyzed is HB 2294, rather than the overall B&O tax system, is fundamentally flawed. As noted above, the adjustment of the aerospace B&O tax rates fits into the State's overall multi-rate tax regime in which individual rates are moved independently of each other. The United States asserts that Washington has provided such adjustments to several other business activities in the State such as biofuels manufacturing, timber products manufacturing, nuclear fuel assembly manufacturing, wholesaling and retailing, flour and oil manufacturing, dried pea and meat processors, and stevedoring.[263]

4.142 Noting that the European Communities also raises challenges to other Washington State tax measures, the United States argues that in none of these cases does the European Communities establish that subsidization exists.[264] In particular, in respect of the European Communities' claims that certain other Washington State and local tax measures are subsidies that are inconsistent with the SCM Agreement – B&O tax credits, certain sales and use tax exemptions, leasehold excise tax exemptions, property tax exemptions, and a local B&O tax rate reduction – the United States argues that most of these tax measures are not subsidies at all, and those that are subsidies are either not actionable or are too small to cause adverse effects. In some cases, for instance, the tax measures are not specific to Boeing. In other cases, Boeing has not and will not use the tax measures at issue because they are tied to events, such as the building of a new Boeing manufacturing facility for the 787, that the United States asserts did not and will not occur.[265]

Project Olympus Master Site Agreement subsidies

4.143 With respect to certain general infrastructure projects and six other measures taken by the State of Washington, the United States argues that none of these measures constitute actionable subsidies within the meaning of the SCM Agreement because they do not meet one or more of the

[261] Executive Summary of the United States' second written submission, para. 47.
[262] Executive Summary of the United States' second written submission, para. 48.
[263] Executive Summary of the United States' second written submission, para. 49.
[264] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 8.
[265] Executive Summary of the United States' first written submission, para. 41.

Agreement's requirements for a potentially actionable subsidy – (i) a financial contribution, (ii) that confers a benefit, and (iii) is specific.[266]

4.144 In connection with the infrastructure measures of the State of Washington, the United States understands the European Communities to be contesting two road improvement projects contemplated by the State on major public highways. The United States argues that these two projects are not subsidies because the roads are quintessential general infrastructure; they are open to all and serve a broad range of people, businesses, and communities.[267] The improvements to I-5 and SR-527 constitute general infrastructure because they are major roads serving countless businesses, tourists, and commuters.[268] These two public roads are part of a state-wide infrastructure improvement plan and are projects that are quintessential general infrastructure, which is explicitly excluded from the SCM Agreement's disciplines.[269] These improvements – which were identified by the State well before the signing of the Project Olympus Master Site Agreement – were completed as part of a state-wide package to improve infrastructure throughout the State. The United States maintains that these projects in fact amount to general infrastructure, which is not a financial contribution – and thus, not a subsidy – under the SCM Agreement. [270]

4.145 The European Communities is also challenging improvements to the Port of Everett – a busy port used by many industries, which the United States argues are not specific because they also serve a broad range of people, businesses, and communities.[271] The United States further argues that the rail barge transfer facility similarly constitutes general infrastructure and thus is not a financial contribution within the meaning of Article 1 of the SCM Agreement because the project was undertaken to alleviate congestion on the BNSF freight railroad mainline and the facility is open to all users. Thus, it constitutes general infrastructure.[272]

4.146 The United States next argues that the European Communities erroneously asserts that Washington has provided a subsidy to Boeing by freezing the rates that it pays for certain utilities. The United States asserts that, in fact, Boeing pays the same rates as other commercial, industrial, and government customers, which means that it receives no financial contribution in the form of revenue foregone that is otherwise due. Fourth, the European Communities contests Boeing's payment of certain landing fees at a municipal airport, which are also not subsidies to Boeing because, according to the United States, these fees are covered by an agreement between the airport and Boeing, which makes clear that there is no financial contribution or benefit because Boeing effectively pays a higher rate under the agreement than other airport users.[273]

4.147 Regarding the European Communities' claim that the State of Washington is subsidizing Boeing by providing State employees who offer regulatory and other assistance to Boeing in the normal course of their employment, the United States asserts that such assistance by State employees, which is only a small portion of their total workload, provides no financial contribution or benefit to Boeing. Even assuming a benefit, the project coordinators are not specific to Boeing because numerous other projects receive similar assistance from the State. [274]

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[266] Executive Summary of the United States' first written submission, para. 42.
[267] Executive Summary of the United States' first written submission, para. 43. See also, Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 9
[268] Executive Summary of the United States' second written submission, para. 50.
[269] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 9.
[270] Executive Summary of the United States' second written submission, para. 50.
[271] Executive Summary of the United States' first written submission, para. 43.
[272] Executive Summary of the United States' second written submission, para. 50.
[273] Executive Summary of the United States' first written submission, para. 43.
[274] Executive Summary of the United States' first written submission, para. 44.

BCI deleted, as indicated **[***]**

4.148 Regarding certain litigation costs that may arise out of an agreement between Boeing and the State of Washington, the United States argues that these are also not a subsidy, as the European Communities alleges. It explains that the State transfers no funds to Boeing for litigation expenses that the company chooses to incur, so there is no financial contribution.[275]

4.149 In relation to the European Communities' assertion that the State of Washington is providing subsidies to Boeing in the form of tax and other incentives for Boeing's 747 Large Cargo Freighter, the United States submits that Washington State is not providing any special tax incentives to this airplane, and is therefore not foregoing any revenue otherwise due. It is also not providing other goods or services for this aircraft.[276]

4.150 Additionally, the United States argues that the European Communities' claims regarding certain job training measures and an employment center that will revert to public use, also lack merit.[277]

Conclusion on the State of Washington measures

4.151 In short, the United States submits that:

(a) The European Communities has failed to establish that Washington State's B&O tax adjustment results in revenue foregone to the State. The European Communities' claim that the B&O tax adjustment results in revenue foregone is based on an analysis of the B&O tax adjustment for aerospace in isolation and without a consideration of the taxation regime in which the adjustment operates. This approach is inconsistent with the Appellate Body's guidance for analyzing revenue foregone under the SCM Agreement and thus fails. Because Washington State has multiple rates for taxing comparable income, it is the range of B&O tax rates applied to all business activities in the State that serves as the appropriate normative benchmark. Furthermore, as the adjustment moves the B&O tax rate for aerospace within the range of the B&O tax rates for all business activities in the State, Washington State is not foregoing revenue that is otherwise due. Accordingly, the B&O tax adjustment does not result in a financial contribution or a subsidy under the SCM Agreement. The European Communities has also failed to demonstrate that the B&O tax adjustments for Washington aerospace component manufacturers can be attributed to Boeing.[278]

(b) The European Communities has failed to satisfy its burden of establishing that any of the infrastructure measures it challenges is "other than general" under the SCM Agreement. Each of the infrastructure measures challenged by the European Communities constitutes general infrastructure because they are available to all users without limitation.[279]

(c) The European Communities' alternative argument that the infrastructure measures at issue as well as other elements of the Master Site Agreement are subsidies because of

[275] Executive Summary of the United States' first written submission, para. 44.
[276] Executive Summary of the United States' first written submission, para. 44.
[277] Executive Summary of the United States' first written submission, para. 44.
[278] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 18.
[279] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 19.

> Article 10.4.1 of the MSA is based on a misreading of that provision and its legal effect.[280]

4.152 Lastly, the United States submits that in general, the standards advocated by the European Communities would leave set in stone the rates of any Member that employed variable rate taxes. Under its theory, any lowering of an excessive tax rate would be a subsidy, leaving Members no flexibility but to increase taxes.[281]

(ii) State of Kansas and municipalities therein

4.153 The United States submits that the European Communities challenges two tax measures in the State of Kansas, neither of which is a WTO-inconsistent subsidy.

Wichita IRB tax breaks

4.154 First, the United States notes that the European Communities contests industrial revenue bonds issued by the City of Wichita as an ongoing actionable subsidy to Boeing, despite the fact that Boeing ceased its large civil aircraft operations in Kansas in 2005. The United States observes that before that time, Boeing – like many companies in Kansas – used bond financing pursuant to a widely available and long-standing economic incentive program. The European Communities attempts to minimize the significance of these facts by distorting the nature of the bond program and asserting that the post-2005 benefits have been "passed through" to Boeing based on an economist's opinion not grounded in the facts of this case. But, for the United States, the European Communities' subsidy claims regarding the Wichita bonds lack merit.[282] More specifically, the United States asserts that the industrial revenue bonds are not a financial contribution because the City of Wichita is not foregoing revenue on personal property. Kansas no longer assesses property or sales tax on commercial and industrial machinery and equipment. Thus, even without the industrial revenue bonds, no tax revenue would be due to Kansas or its subdivisions from any business on its machinery and equipment, which represents most of the property financed with the industrial revenue bonds at issue.[283]

4.155 The United States further argues that even if the industrial revenue bonds provide a financial contribution, they are still not an actionable subsidy because they are not specific within the meaning of Article 2 of the SCM Agreement. Industrial revenue bonds are a transparent and generally available program, provided for in Kansas law, that the State of Kansas and its subdivisions have been administering and applying to companies from a broad range of industries for more than 40 years. Industrial revenue bonds are also not de facto specific because Boeing's percentage of industrial revenue bonds is not disproportionate. Furthermore, although the industrial revenue bonds are not an actionable subsidy, the United States also notes that any benefit of the industrial revenue bonds to an independent and unrelated company (Spirit Aerosystems) did not pass through to Boeing.[284]

4.156 Moreover, the United States argues that: (i) the European Communities' analysis of the alleged "pass-through" of subsidies to Boeing does not actually provide analysis, just conclusions and assumptions; (ii) a review of the facts and the actual circumstances of the sale of the Wichita facilities to Onex shows that at the time of the sale and when the price was agreed, there was no certainty of future issuance of IRBs – as assumed by the European Communities' expert; (iii) the European Communities' approach is fundamentally irrelevant because it incorrectly assumes that

[280] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 20.
[281] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 8.
[282] Executive Summary of the United States' first written submission, para. 45.
[283] Executive Summary of the United States' first written submission, para. 46.
[284] Executive Summary of the United States' first written submission, para. 47.

value equals price; and finally; (iv) Mr. Wachtel ignores actual evidence of elements that played a role in Onex's valuation and the absence of any evidence that such elements included the value of any possible future IRBs.[285] The United States also states that there was every reason to believe the pass-through alleged by the European Communities and its expert did not occur even under the European Communities' own theoretical construct.[286]

4.157 In conclusion, the United States recalls that the industrial revenue bonds issued by the State of Kansas neither provide a financial contribution to Boeing nor are specific to Boeing. The European Communities claims that Kansas' IRB program is merely a scheme to make Boeing eligible for certain tax abatements. However, the United States asserts that the tax exemptions are no longer relevant to Boeing because Kansas has stopped assessing property tax and sales tax on commercial and industrial machinery and equipment, which comprises the vast majority of property that Boeing has financed with industrial revenue bonds. Furthermore, the industrial revenue bonds are not *de jure* specific because they are broadly available to "any person, firm or corporation". Industrial revenue bonds are also not de facto specific because in the light of the "extent of diversification of economic activities" within Wichita, the amount of industrial revenue bonds issued to Boeing is not indicative of predominant use.[287]

4.158 In its further written submissions, the United States maintains that the European Communities' challenge to the industrial revenue bonds provided by the City of Wichita and the State of Kansas as WTO-inconsistent subsidies is without merit. The United States contends, as it asserts is shown in the United States' first written submission, that much of the property at issue is no longer subject to tax in Kansas, such that no revenue is foregone with respect to such property as a result of the IRB program.[288] More fundamentally, the United States argues that the European Communities has failed to establish that the industrial revenue bonds are specific. As the United States stated in its first written submission, this is unsurprising in the light of the economy of Wichita and is not a sign of specificity. Aircraft production is the core industry of Wichita, and Boeing's Wichita facility was not only the largest private sector employer in Wichita, but also the largest private sector employer for the entire State of Kansas prior to its sale to Spirit. Accordingly, the United States argues that the amount of industrial revenue bonds received by Boeing does not support a finding of specificity. The European Communities failed to respond to this in its oral statement at the first panel meeting and merely stated that "Boeing's receipt of industrial revenue bonds is disproportionate to its economic position in the City of Wichita". On this basis the United States submits that the European Communities falls far short of its burden in demonstrating specificity.[289]

KDFA bonds

4.159 The United States understands the European Communities to be challenging KDFA bonds as an actionable subsidy to Boeing, even though Boeing never received or even applied for KDFA bonds. The United States notes in this context that the European Communities nonetheless attempts to allocate KDFA tax benefits away from the actual recipient of the bond financing – Spirit, an independent and unrelated company – to Boeing. As with its claims regarding industrial revenue bonds, the European Communities asserts that KDFA's intent to issue bonds for Spirit was known

[285] United States' response to question 255, para. 437.
[286] United States' response to question 367, para. 213.
[287] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 10.
[288] Executive Summary of the United States' second written submission, footnote 2. The IRBs will also be less attractive since an IRB is not required in order to be eligible for a tax exemption on personal property.
[289] Executive Summary of the United States' second written submission, para. 51. See also, Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 21.

before Boeing's sale of Spirit closed, and, on that basis, concludes that the sales price must have reflected expected future bond financing.[290] The United States submits in this respect that neither the facts nor economic theory support a finding that the KDFA bonds were a subsidy to Boeing. First, it argues that the subsidies are not a financial contribution to Boeing, which never received KDFA bond financing. Second, the United States submits that the European Communities incorrectly assumes that Spirit was assured of the future interest payment rebate at the time the transaction price was agreed – and, moreover, that the amount of the future interest payment rebate benefit was known at that time. Third, the United States argues that the European Communities argument is based on a mistaken theory that the value of a future expected tax benefit would necessarily be captured by the seller.[291]

4.160 The United States reiterates its position that not a single bond under this program has even been issued to Boeing. Instead, these bonds were issued to an independent entity, unrelated to Boeing.[292]

(iii) State of Illinois and municipalities therein

4.161 With respect to the European Communities' challenges to measures by the State of Illinois, the United States submits that the European Communities fails to establish that these measures are specific. The United States argues that the State of Illinois has established criteria to encourage businesses to locate their corporate headquarters in the State. These criteria are not specific to an industry or enterprise. Thus, they do not constitute an actionable subsidy under the SCM Agreement.[293]

Boeing relocation package

4.162 More specifically, the United States submits that, contrary to the European Communities' claims, certain measures taken by the State of Illinois and its localities pursuant to the Corporate Headquarters Relocation Act ("CHRA") and other state and local law do not constitute actionable subsidies to Boeing. The CHRA provides that the State of Illinois will reimburse qualifying relocation costs for corporate headquarters. Moreover, they were for amounts that were minimal in comparison with the cost of developing and producing large civil aircraft. The United States argues that the relocation expenses that Boeing received pursuant to that act are not a WTO-inconsistent subsidy, as the European Communities alleges, because the reimbursement of such expenses was not specific to Boeing or similar enterprises.[294]

4.163 As to the state tax credits provided by Illinois pursuant to another state law – EDGE Tax Credit Act – the United States argues that they also do not provide an actionable subsidy to Boeing, despite the European Communities' claims to the contrary. Given that companies of all sizes in a broad range of industries are eligible to apply for and have received EDGE tax credits, the United States submits that they are not specific within the meaning of Article 2.1 of the SCM Agreement.[295]

4.164 Furthermore, the United States considers that the European Communities' claims regarding property tax abatements provided for under Illinois law are without merit also. The United States clarifies that the Illinois Property Tax Code allows any taxing district in the State to abate the property

[290] Executive Summary of the United States' first written submission, para. 48.
[291] Executive Summary of the United States' first written submission, para. 49.
[292] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 11.
[293] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 12.
[294] Executive Summary of the United States' first written submission, para. 50.
[295] Executive Summary of the United States' first written submission, para. 51.

taxes of a wide variety of enterprises. The CHRA amended the relevant provision of the code to include relocated corporate headquarters among the types of enterprises eligible to receive property tax abatements. The property tax abatements provided by two localities in the State of Illinois are not WTO-inconsistent subsidies because they are not specific to Boeing.[296]

Retirement of the former lease

4.165 The United States notes that the European Communities challenges a very small lease termination payment made by the City of Chicago on behalf of Boeing, which the United States does not contest.[297]

(c) U.S. Federal Government measures

(i) U.S. aeronautics R&D

4.166 Before addressing specific R&D measures challenged by the European Communities, the United States makes the following observation in relation to Article 2 of the SCM Agreement.

4.167 The United States contends that a generally applicable law does not confer a specific subsidy simply because one of the government authorities enforcing the law has a limited scope. Specifically, it contends that Article 2.1(a) and (b) frame the *de jure* specificity analysis in terms of whether the granting authority or the legislation pursuant to which that authority operates explicitly limits access to certain enterprises. The United States notes that the European Communities does not dispute that the laws and regulations governing U.S. Government contracting, treatment of independent research and development and bid and proposal expenses, and attribution of rights in patents, are applicable to contracting in all sectors of the economy. However, the European Communities argues that when applied by NASA or DOD, those measures are specific as to the "research-based defense and aerospace industries" because only companies capable of meeting the procurement needs of those agencies sell to those agencies. This argument disregards the text of the SCM Agreement and would render the specificity requirement a nullity when a number of specialized agencies administer generally available laws or programmes. In other words, the European Communities would pre-ordain its desired conclusion by arbitrarily confining its specificity analysis to the group of enterprises that forms the focus of its complaint.[298]

4.168 In addition, the United States observes that Article 2.1(a) applies only when an authority or legislation "explicitly limits access to a subsidy to certain enterprises". The ordinary meaning of "limit" is "{c}onfine within limits, set bounds to; restrict". The ordinary meaning of "access" is "{a}dmittance (to the presence or use of); {a} way or means of approach or entrance". Thus, an authority or its legislation limits access to a subsidy within the meaning of Article 2.1(a) when it restricts admittance to the subsidy to "certain enterprises". Performing this evaluation will involve identifying which types of enterprise have access to a subsidy, and evaluating whether that group is sufficiently discrete to meet the definition of certain enterprises, which the chapeau of Article 2.1 defines as "an enterprise or industry or group of enterprises or industries". Where legislation provides for multiple authorities to grant payments under a program, the fact that an enterprise or industry is eligible for payments from one authority would indicate that it has "access" to the alleged subsidy within the meaning of Article 2.1. The fact that the same enterprise was ineligible to receive such payments from a second granting authority would not change the fact of its access through the first

[296] Executive Summary of the United States' first written submission, para. 52.
[297] Executive Summary of the United States' first written submission, para. 52.
[298] Executive Summary of the United States' second written submission, para. 9.

granting authority. Therefore, the United States submits that the second authority's rules should not, absent other considerations, be considered to "limit access" to the alleged subsidy by the enterprise.[299]

4.169 The United States argues that the baseline for an evaluation of disproportionality is defined by the alleged subsidy, and not by the jurisdiction of challenged authorities. In this context, the United States notes that the European Communities and the United States apparently agree that determining whether an apparently non-specific subsidy is, in fact, granted to certain enterprises "in disproportionately large amounts" requires a comparison of users of the alleged subsidy against some baseline. However, the United States disagrees on what the baseline is. The text of Article 2.1(c) calls for a comparison between use of a subsidy by enterprises as to which the subsidy is alleged to be specific and the position of subsidy users within the baseline group of all enterprises that have "access" to the alleged subsidy. The United States contends that if the actual usage by "certain enterprises" is out of proportion to their size relative to the baseline group of all enterprises that receive the alleged subsidy, that would be one "other factor" indicating specificity with respect to the certain enterprises.[300] The United States claims that for the European Communities, however, the proper comparison is between the "certain enterprises" and the overall U.S. economy. It notes that the chapeau of Article 2.1 states that subparagraphs (a), (b), and (c) are principles for determining whether a subsidy is specific to "certain enterprises . . . within the jurisdiction of the granting authority". The United States concludes that the European Communities divines from this passage that the de facto specificity analysis must take as its baseline the "jurisdiction" of the granting authorities, and in the European Communities' view, for DOD and NASA, this covers the entire United States.[301]

4.170 The United States argues that the text does not support this interpretation. It posits that the phrase "within the jurisdiction of the granting authority" in the chapeau of Article 2.1 acts to delimit the enterprises that are potentially subject to the specificity inquiry, making clear that enterprises outside the jurisdiction are not relevant. Nothing in the phrase suggests, as the European Communities seems to believe, an additional meaning that the specificity inquiry must invariably be based on all enterprises within the jurisdiction. In fact, several of the factors for consideration narrow the class of enterprises subject to consideration. To read "within the jurisdiction of the granting authority" as expanding the inquiry to all enterprises in the jurisdiction would, in the United States' view, deprive the subsequent factors of their ordinary meaning.[302]

4.171 The United States further contends that the interpretation advanced by the European Communities would effectively nullify the *de jure* specificity factors under Article 2.1(a) and (b). Both of these subparagraphs create standards under which a subsidy would not be specific even if some enterprises in the jurisdiction of the granting authority had no access. But if the European Communities were correct, the amount of alleged subsidies granted to classes of subsidy recipients found nonspecific under Article 2.1(a) and (b) would always, according to the United States, be found disproportionate, because the subsidy recipients would represent 100 per cent of the amount of the subsidy granted, but less (and often far less) than 100 per cent of the overall economy.[303]

R&D payments constitute a purchase of service for adequate remuneration

4.172 In response to the European Communities' argument that NASA research programmes provided grants, and goods and services to Boeing for free, the United States argues that what the

[299] Executive Summary of the United States' second written submission, para. 10.
[300] Executive Summary of the United States' second written submission, para. 11.
[301] Executive Summary of the United States' second written submission, para. 12.
[302] Executive Summary of the United States' second written submission, para. 13.
[303] Executive Summary of the United States' second written submission, para. 14.

European Communities calls research "grants" were actually NASA purchases of R&D services in furtherance of NASA's own objectives. Therefore, as with DOD's research purchases, these are not financial contributions within the meaning of the SCM Agreement. Similarly, the alleged provisions of goods and services were in fact value-for-value exchanges pursuant to Space Act Agreements. Boeing received nothing for free. In both purchases and under Space Act Agreements, NASA focuses on basic, fundamental R&D covering a broad range of aeronautics topics. It does not fund the development of particular products, or promote the interests of particular companies. Thus, it conveys no commercial advantage and no financial contribution.[304]

4.173 The United States agrees with the European Communities' assertions that NASA does not acquire or produce large civil aircraft. However, the United States submits that NASA does acquire, produce, and disseminate knowledge. And, accordingly, the "true purpose" of the NASA programmes is to develop and disseminate the greatest amount of information to the broadest group in the shortest amount of time possible, and not to "convey resources to Boeing". The United States asserts that NASA's contracts with Boeing and its actions provide evidence that this is the case, and that the challenged measures are purchases of services – not just in name, but in substance. NASA formulates its own goals, based on consultations with a wide variety of stakeholders. NASA seeks proposals from contractors on how to meet those goals, and accepts the bid that presents the best value. NASA and its contractor negotiate over the terms of the contract. The contractor must then carry out all of the terms of the contract in return for payment by NASA. This process, documented by the citations to U.S. procurement regulations, the numerous examples of individual contracts and modifications, and the huge volume of publicly disseminated literature generated by these programmes, demonstrates, in the United States' view, that NASA's contracts with Boeing are not, as the European Communities would have the Panel believe, a "sham".[305]

4.174 As for the "true purpose" of NASA's programs, the United States claims that it is not – as the European Communities intimates – an elaborately staged effort "to convey resources to Boeing". Rather, the United States has demonstrated that the "true purpose" of NASA's programs is to use and disseminate the results of research that will advance its broad, overarching goals, including a safer and more efficient commercial aerospace system. That research is used both within government, by U.S. government agencies, such as the FAA and DOD, and airport authorities, and outside of government by industry and academia.[306]

4.175 The United States also submits that there are commercial benchmarks for the NASA/DOD purchases of research services challenged by the European Communities, and they demonstrate that the terms on which NASA/DOD purchase R&D services are not more favorable than the terms on which commercial entities in the U.S. market are willing to purchase the same services.[307] These benchmarks demonstrate several important points. First, there is no fixed rule in the marketplace as to the division of intellectual property rights when one entity funds research performed by another entity, as the European Communities would have the Panel believe. Second, sellers of R&D services in the marketplace expect to receive more money if they convey greater intellectual property rights to the purchaser.[308]

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[304] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 1.
[305] Executive Summary of the United States' second written submission, para. 24.
[306] Executive Summary of the United States' second written submission, para. 25.
[307] United States' response to question 21, para. 66.
[308] United States' response to question 21, para. 64.

BCI deleted, as indicated **[***]**

NASA

4.176 At the outset, the United States points out that NASA is most widely known as the agency that put a man on the moon, and that today it continues to conduct a variety of exploratory activities designed to expand human knowledge. The United States explains that this is, in fact, a vital part of its stated mission, and has been since NASA was established in the 1950s with the declaration that "it is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all mankind". Recognizing further that "the general welfare and security of the United States require that adequate provision be made for aeronautical and space activities", the U.S. Congress has also directed NASA to sponsor leading-edge research in aeronautics and space technology in the ultimate interests of the public.[309]

4.177 In contrast, the United States observes that while reading the European Communities' submission, it might seem as if NASA was established and funded for the benefit of Boeing. In fact, the United States notes that the European Communities treats virtually the entire operation and budget of NASA's Aeronautics Research Mission Directorate as a subsidy to a few companies in the aerospace sector, even though most of NASA's aeronautics research budget went to support research at the NASA Centers (infrastructure and salaries to NASA employees), contracts with a far broader group of companies, and independent research facilities, and grants to universities.[310] The United States immediately points to a flaw permeating the European Communities' claims, i.e. that the European Communities' treatment of financial contributions to Boeing's suppliers as payments to Boeing is based on the assertion, made without support of any credible evidence, that these independent and unrelated companies somehow (and contrary to expectations for a profit-maximizing actor) passed the alleged subsidies through to Boeing.[311]

4.178 Responding to the European Communities' argument that the purpose of NASA programmes is "to assure the pre-eminence of U.S. aeronautics", the United States asserts that that is only one factor among many, which include the expansion of human knowledge of the Earth and of phenomena in the atmosphere and space.[312] Equally important in the United States' view, is the fact that in most cases, the research work performed under NASA aeronautics programmes is made publicly available (consistent with national security and foreign policy), and may be drawn upon not only by Boeing, but also by Airbus and the companies supplying Airbus.[313]

4.179 The United States considers that the European Communities belittled the importance of the scientific reports that NASA releases to the world. The United States asserts that, in fact, a single scientific report can change the world. In the United States, a scientific report on the effects of cigarette smoking led to a dramatic decline in the number of smokers. Closer to the issues in this dispute, the United States observes that NASA performed the initial research on the positive aerodynamic effects of winglets, which are little upturns or downturns at the tips of wings and that Boeing participated in this research. Yet it was Airbus, and not Boeing, that first put winglets on its airplanes, many years ahead of Boeing.[314]

4.180 The United States points out that, instead of looking at the facts of the NASA contracts, many of which the European Communities included with its first written submission, the

[309] Executive Summary of the United States' first written submission, para. 16.
[310] Executive Summary of the United States' first written submission, para. 17.
[311] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 14.
[312] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 2.
[313] Executive Summary of the United States' first written submission, para. 17.
[314] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 6.

European Communities focuses on statements made about NASA's aeronautics research and its usefulness to the aerospace community. NASA, Congress, industry, and academia have, at various times, attempted to make a case for augmenting the attention to, and budget for, the aeronautics elements of NASA's mission, and the European Communities has selectively quoted all such statements to that effect. In fact, the United States notes that NASA's aeronautics mission is put into context by the organizational chart of the NAC, which shows that aeronautics is the focus of only one of its six subcommittees (the others being audit and finance, exploration, human capital, science, and space operations).[315] Responding to the European Communities' observations made in this context, the United States clarifies that it has not requested the Panel to ignore statements in contracts, or by NASA or DOD officials in public. It argues that it has asked the Panel to put them in the context of everything each agency does – not evaluate them in isolation, as the European Communities asks the Panel to do.[316]

4.181 The United States asserts that the European Communities also attempts to inflate Boeing's role in setting NASA's priorities by noting that Boeing employees periodically served on the NAC. However, the Council membership draws from a broad variety of perspectives, including retired astronauts, retired military officers, academics, business, and civil society.[317] The United States argues that there are currently no Boeing employees on the NAC. Even in 2005, when Boeing Senior Vice President Jim Jamieson was on the NAC, he was only one of more than 20 board members.[318] In any event, the Advisory Council is just that – advisory – and it is the NASA Administrator who sets the agency's research agenda.[319]

4.182 In addition, the United States considers it is important to note that the relatively limited amount of aeronautics-focused work that NASA does (in-house and subcontracted), does not confer any competitive advantage. As the European Communities concedes, NASA's R&D activities are far removed from the actual development and production of particular large civil aircraft models.[320] Instead, the United States asserts that the research it does is focused on basic tools and technologies that can improve the efficiency and safety of all aircraft – from single-seat general aviation aircraft to very large aircraft configurations, including a revolutionary-configuration Blended Wing Body and traditional-configuration A380. And many of the "aircraft" that NASA has studied under the programs addressed by the European Communities do not even remotely resemble large civil aircraft, including the designs for a hypersonic Highly Reliable Reusable Launch System, a (hypersonic) scramjet, a supersonic jet, a blended wing body, and rotorcraft. And finally, the United States points out that the results of NASA research are disseminated publicly, except where prohibited by U.S. export controls. The United States considers that these are scarcely the actions of an agency seeking to confer a competitive advantage on domestic producers.[321] Moreover, the United States emphasizes that the standard advocated by the European Communities would make it potentially inconsistent with

[315] Executive Summary of the United States' first written submission, footnote 12 referring to NASA Advisory Council Organizational Chart, Exhibit US-100. Executive Summary of the United States' first written submission, para. 19.

[316] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 11.

[317] Executive Summary of the United States' first written submission, footnote 13 referring to NASA Advisory Council Members List, Exhibit US-101.

[318] Executive Summary of the United States' first written submission, footnote 14 referring to Exhibit EC-312.

[319] Executive Summary of the United States' first written submission, para. 20.

[320] Executive Summary of the United States' first written submission, footnote 15 referring to European Communities' first written submission, para. 463.

[321] Executive Summary of the United States' first written submission, para. 21.

the SCM Agreement for any Member to conduct research on topics of public interest. Such research would invariably be found to be a subsidy.[322]

4.183 The United States contends that any evaluation of the purpose of NASA aeronautics research must look at all of the evidence, including the facts that:[323]

- NASA's governing statute instructs it to pursue "{t}he expansion of human knowledge of the Earth and of phenomena in the atmosphere and space".
- Airbus' own engineers admit that NASA research has a "generic and academic value" to Airbus.[324]
- NASA purchases research services from a wide variety of entities in a wide variety of industries.[325]
- The NASA officials quoted by the European Communities have in fact testified to their desire to disseminate NASA's knowledge not just to U.S. aircraft manufacturers, but to users of aircraft throughout the world.[326]
- NASA maintains the largest open library of aeronautics research in the world, available to scientists throughout the world, who may obtain documents at little or no cost.[327]
- NASA insists that *all* of the research it funds be disseminated broadly.[328] As a result, scientific reports funded by NASA programmes issue as soon as they meet publication standards, throughout the life of a program and beyond.[329]
- Scientists throughout the world access and cite NASA reports, including the publications generated by Boeing under the programmes challenged by the European Communities, showing that the knowledge generated by NASA provides a foundation on which everyone – including Airbus – can build.[330] This information would not exist in the public sphere if NASA did not fund the research and publish the results.

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[322] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 7.

[323] United States' comments on European Communities' response to question 324, para. 51.

[324] Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, Exhibit EC-1175 para. 72.

[325] United States' response to question 159, para. 148.

[326] United States' non-confidential oral statement at the second meeting with the Panel, para. 41.

[327] United States' first written submission, para. 209; United States' non-confidential oral statement at the first meeting with the Panel, paras. 19, 56, and 63.

[328] This is true even of the small volume of research protected by limited early release clauses, as the United States discusses below in its comment on the European Communities' response to question 325.

[329] The Integrated Wing Design ("IWD") Project, which the European Communities treats as a benefit exclusive to Boeing, resulted in the publication of 67 papers, which were cited 369 times, including 40 citations in Europe. This project was only one element of the larger Advanced Subsonic Technology ("AST") Program. United States' second written submission, paras. 67; United States' response to question 23, para. 73; United States' response to question 186, para. 208; *List of publications based on work performed in the Integrated Wing Design (IWD) Project*, Exhibit US-1140 (revised).

[330] *List of publications based on work performed in the Integrated Wing Design (IWD) Project*, Exhibit US-1140(revised). NASA's contracts with Boeing alone under the eight challenged programs produced 291 published scientific reports that were cited 1036 times, including 250 citations in Europe. *Reports and articles published by Boeing/McDonnell personnel pursuant to aeronautics research contracts*, Exhibit US-1253.

- An even wider group of industries participate in NASA conferences, provide advice to NASA, and participate in its programmes.[331]

4.184 The United States observes that the European Communities attempts to minimize the significance of the results of the research contracts, by stating: "it goes without saying that no commercial entity would ever pay another entity to conduct R&D primarily for the other entity's benefit, receiving only nominal research reports to disseminate to the public and license rights it never plans to utilize in return". The United States argues that each element of this assertion is wrong.[332] First, the United States submits that research reports are not "nominal". NASA's server has thousands of reports generated by NASA scientists and employees of Boeing and other enterprises working pursuant to contracts with their employers. This represents a huge database of knowledge for the world aeronautics research community. Second, the United States argues that the European Communities provides no evidence that the U.S. Government "never plans to use" the patent and license rights acquired under the research contracts. The rights in question are government rights, so that Boeing would be barred from charging any U.S. Government agency for use of any patents or data rights generated under one of the research contracts, including by the FAA, DOD, or by NASA itself in subsequent research. Third, according to the United States, the European Communities provides no evidence that the R&D conducted at NASA's request is "primarily for {Boeing's} benefit". In fact, the research challenged by the European Communities is for the broader public good, including public users of air transportation, airlines, and the academic community, as well as the aeronautics industry, including the suppliers of aircraft components and Airbus itself. And, finally, the United States submits that the European Communities provides no support for the assertion that a commercial entity would not pay another entity to conduct services that also provide benefit to that other entity. Commercial transactions routinely provide benefits to both sides.[333]

4.185 In the whole, the United States maintains that the European Communities has not established the existence of a financial contribution. The European Communities relies on rhetoric, rather than evidence, to support its contention that NASA research contracts with Boeing were really grants and, accordingly, has failed to carry its burden of proof. The United States submits that this is not because the United States is hiding evidence, as the European Communities claims. The United States asserts that it provided copies of all of the relevant contracts as part of the Annex V procedure in DS317, and NASA provided a number of contracts directly to the European Communities in response to requests under the U.S. Freedom of Information Act. Rather, as the United States has shown, the evidence demonstrates that these payments were not grants, but instead were for purchases of services, a type of transaction that is not a financial contribution within the meaning of Article 1.1(a)(1). Thus, the European Communities has not met its burden of proof, and the United States has fully rebutted the unsupported arguments of the European Communities.[334]

4.186 The United States also argues that the European Communities' assertion as to the benefit associated with the NASA-Boeing transactions was not supported. It notes that the European Communities' assertions that NASA payments conferred a benefit on Boeing follow the same theme as its arguments regarding the existence of a financial contribution – that NASA received nothing in return for the money it paid. This, according to the United States, is manifestly incorrect. In its first written submission and oral statement, the United States has demonstrated that the U.S. Government receives a commensurate value in exchange for the money NASA pays Boeing.

[331] United States' first written submission, para. 193; *Membership of the NASA Advisory Council, 1997-2007*, Exhibit US-143; United States' second written submission, para. 64, note 102.
[332] Executive Summary of the United States' second written submission, para. 27.
[333] Executive Summary of the United States' second written submission, para. 28.
[334] Executive Summary of the United States' second written submission, para. 23.

The United States receives the labor of Boeing scientists and engineers directed to the objectives of the U.S. Government. The United States can and does disseminate the knowledge they generate for the public benefit. By purchasing the research, the government receives IP rights with regard to inventions and data that it would not otherwise hold.[335]

4.187 In short, the United States submits that NASA R&D contracts are not financial contributions. NASA's contracts with Boeing create a large volume of aeronautics research for public use, including improving air transport safety and expanding the capacity of the air traffic control system. These clearly advance NASA's objective of developing and disseminating aeronautics knowledge. Thus, there is no basis for the European Communities' contention that these contracts are a "sham" disguising a "grant" or "direct transfer" to Boeing.[336] The United States also submits that NASA R&D contracts do not confer a benefit. NASA researches aeronautics topics and disseminates the results of its efforts. The contracts with Boeing advance this objective, and the European Communities has failed to show otherwise. Therefore, its only argument regarding benefit – that NASA receives nothing in return for the money it pays Boeing to conduct research – has no support in the evidence.[337]

4.188 Turning to the issue of magnitude of the NASA R&D support, the United States argues that, in disregarding the broad scope of NASA's aeronautics research, the European Communities greatly overstated – by nine or ten times – the amount of money NASA paid for aeronautics research contracts with Boeing.[338] The European Communities asserts that NASA paid Boeing $10.4 billion in "grants", but, according to the United States, the actual amount that NASA paid Boeing was less than $750 million. Even more importantly, the European Communities ignored the fact that Boeing did not receive those funds as a "grant". The United States argues that they were a purchase by NASA of research services performed for a variety of public purposes. As the purchase of a service is not a financial contribution, these NASA payments for research services are not a financial contribution and, therefore, are not actionable subsidies.[339]

4.189 The United States notes in this context that the European Communities calculates the value of payments to Boeing by equating the alleged provision of goods and services to Boeing with NASA's operating budget. In other words, according to the United States, the European Communities asserts that the cost to NASA of paying employees and running NASA's operations was actually a service provided to Boeing. The United States contests this proposition, arguing that the government provides nothing to Boeing when NASA's scientists and engineers do what they do every day, such as turn on the lights in their offices, travel to international conferences, go to the doctor using their federal health insurance and collect pensions when they retire, or any of the other activities they perform in furtherance of NASA's objectives.[340]

4.190 The United States also argues that the European Communities failed to support its calculation of the amount of the financial contribution. More specifically, it argues that the European Communities, in tandem with its subsidy analysis, attempts to estimate the value of NASA's research payments to Boeing that it considers to be a financial contribution, which it considers to be identical to the magnitude of the alleged benefit. In its first written submission, the United States demonstrated

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[335] Executive Summary of the United States' second written submission, para. 26.

[336] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 7.

[337] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 8.

[338] Executive Summary of the United States' first written submission, para. 18. See also, Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 3. In addition, the European Communities greatly exaggerates the value of any NASA payments to Boeing.

[339] Executive Summary of the United States' first written submission, para. 18.

[340] Executive Summary of the United States' first written submission, para. 23.

that this calculation was invalid because it was based on several erroneous assumptions, including that the value of NASA's contracts with Boeing for aeronautics research was proportionate to the company's share of U.S. civil aviation production, and that a share of NASA's spending on its own salaries and other expenses was a grant to Boeing. The United States submits that there is no evidence to support these assumptions, and the European Communities cited none in its written submission. These errors led the European Communities to estimate NASA's payments to Boeing as $7.3 billion, when the actual figure was less than $750 million.[341]

4.191 The United States argues that the European Communities' oral statement simply repeated the allegation that the European Communities' consultants had "meticulously examined the NASA budgets to extrapolate funding provided to the U.S. civil aircraft industry for LCA-related R&D . . . and apportioned this funding to Boeing's LCA division based on its share of the U.S. civil aircraft industry". According to the United States, this statement only serves to demonstrate one of the fundamental errors of the European Communities estimates – the European Communities assumes that NASA apportions funding to Boeing's large civil aircraft division based on its share of the U.S. civil aircraft industry. There is no support for this assertion. Moreover, the United States submits that the very data that the European Communities consultants "meticulously examined" further demonstrates the error of their underlying assumption – NASA did not allot its funding according to market share, and the amounts that they assert it spent on aeronautics research contracts with Boeing are greater than the total amount NASA spent on aeronautics research – a mathematical impossibility. Finally, the United States argues that it provided data from NASA's disbursement records indicating that the agency's contracts with Boeing were worth far less than the European Communities' consultants alleged.[342]

4.192 Addressing the value of NASA's research contracts with Boeing and of any facilities, equipment, and personnel provided to Boeing in its oral statement, the United States suggests that since the issue concerns the world of science, it is useful to think in terms of hypotheses. A scientist looking at a question takes known facts, frames a hypothesis as to how the world would act based on those facts, and then tests the hypothesis.[343] The United States contends that the European Communities has presented a hypothesis with regard to the amount of money NASA paid to Boeing for research and development services, namely, that it can determine that amount reliably based on a "top down" approach. The facts it proposes to use are NASA's known budgets for the programmes in question and NASA's known budgets for personnel and facilities. Its hypothesis is that it can derive the amount NASA spent on research related to topics other than engines, and assuming that, out of that budget, NASA paid Boeing an amount equal to Boeing's share of U.S. production of civil aeronautics products. The United States submits that that results in assigning Boeing approximately 80 per cent of NASA's non-engine budget.[344]

4.193 To test this hypothesis, the United States proposes looking at other evidence. For example, NASA's data on total contracting demonstrates that the agency does not pay Boeing an amount equal to its share of U.S. production. The same data show that NASA pays a significant portion of its budget to universities and contractors other than Boeing. In short, the United States argues that the European Communities hypothesis fails.[345] That should be the end of the analysis. As the

[341] Executive Summary of the United States' second written submission, para. 29.
[342] Executive Summary of the United States' second written submission, para. 30.
[343] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 3.
[344] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 4.
[345] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 5.

European Communities is the complaining party, it has a burden of proof on this issue. By presenting a demonstrably incorrect analysis, it has failed to meet that burden of proof.[346]

4.194 The United States contends that it has gone a step further, and that in order to provide the Panel the most accurate information on funds paid to Boeing, it put together its own estimate. To this end, the United States used NASA's internal system for recording payments to NASA's contractors, including Boeing. NASA then identified the contracts under which it made payments to Boeing for research under these programmes, and reported the amount that it paid to Boeing under those contracts.[347] The United States goes on to explain that NASA did this by consulting its records, and asking individuals familiar with the nine programmes in question to identify contracts awarded to Boeing under those programmes. It determined from its payment system how much was paid to Boeing, and reported that amount to the Panel. The United States submits that the European Communities has provided no basis to question that result. The only thing it has done is to identify a small number of contracts, with a relatively small value, that it thinks NASA missed. The United States is in the process of checking the European Communities' claims. Nevertheless, it emphasizes that, even if the European Communities is correct, that would not result in a meaningful change in the outcome – the margin of error would be a few percentage points. This small difference only serves to confirm that NASA's process is substantially accurate. [348]

4.195 The United States notes that the European Communities asserted that the difference between the European Communities' large "top down" number and NASA's figure based on actual payments to Boeing was a reason to question the accuracy of NASA's process. The critical point here, according to the United States, is that the European Communities' huge number is based on a demonstrably incorrect assumption about how NASA spends its money. That figure does not provide a valid benchmark for evaluating NASA's methodology any more than it represents a valid estimate of NASA's payments to Boeing. Nor does it provide any reason to believe that NASA staff, in their efforts, failed to identify any meaningful payments to Boeing under the nine programmes challenged by the European Communities. The United States adds that the European Communities certainly provides no reason to believe that it came up more than $10 billion short.[349]

4.196 The United States submitted a verification exercise in response to Panel Question 188, which asked to explain how the Panel could satisfy itself that the information submitted by the United States with regard to "all relevant contracts and agreements between NASA and Boeing MD" is "accurate and complete". The exercise demonstrated that even if all disputed facts are resolved in favour of the European Communities, including treatment of rotorcraft as related to large civil aircraft, the value of NASA's contracts with Boeing funded under the challenged programmes was *at most* $775 million from 1989 to 2006. Moreover, the Panel's record contains copies of most of the contracts that generated these disbursements, which document the nature of the research conducted and the funding obligated to accomplish that research.[350]

4.197 Even if the Panel decides to reject all of NASA's objective and conservative judgments regarding contracts awarded to Boeing by the aeronautics centers that fall outside the European Communities' claims, the fact remains that all contracts with Boeing funded by the challenged programmes were worth, at most, $1.05 billion. This figure represents the total value of all contracts

[346] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 6.
[347] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 7.
[348] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 8.
[349] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 9.
[350] United States' response to question 341, para. 84.

awarded to Boeing by the four centers during the relevant period, including those related to research outside the European Communities' claim. This total value of all contracts with the four aeronautics centers verifies the fundamental point that the United States has made since its first written submission remains – that NASA's funding of contracts directly with Boeing represents a very small portion of the total amount that the European Communities attributes to Boeing as "funding" under the challenged programmes. The European Communities has provided neither evidence nor argument that would support treating the remainder of contract funding under the challenged programmes – all of which went to contractors unrelated to Boeing and NASA employees – as a subsidy to Boeing.

4.198 The United States also explains that to date, it focused on payments for research, because it understood that as being the focus of the European Communities claim. The United States observes that in recent submissions, the European Communities has begun putting more weight on provisions of facilities, equipment, and employees under Space Act Agreements. In response, the United States asserts that it provided the Panel with further information on Space Act agreements and the value of NASA's effort under those agreements. The United States submits that this evidence, based on actual agency data and not supposition, shows that the provision of facilities, equipment, and employees is not significant in comparison with the value of the contracts, and less than two per cent of the more than $10 billion value the European Communities ascribes to the NASA programmes.[351]

4.199 Despite the many objections to a methodology that treats NASA facilities, equipment, and employees as working for private enterprises, the U.S. response to Question 175 sought to assist the Panel in valuing the facilities, equipment, and employees related to contracts if it nonetheless found that they were "provided" to contractors in the sense of Article 1.1(a)(1)(iii) of the SCM Agreement and conferred a benefit. The United States suggests that if the Panel considered a class of NASA personnel or other expenditures to be in reality a good or service provided to contractors, it could determine the share attributable to Boeing based on the company's 10.4 per cent share of the total value of NASA aeronautics research contracts in the 1989-2006 period.[352] Because this approach is based on real data on NASA's expenditures, it would estimate Boeing's share of any NASA costs more accurately than the European Communities' approach based on Boeing's share of sales of civil aircraft and parts.[353]

4.200 Additionally, in response to the European Communities' assertion that it is not challenging "NASA R&D contracts related to 'air traffic management and air traffic safety' and 'ways to modify airplane flight paths to decrease' fuel consumption", the United States notes that, in fact, these topics were part of the research conducted under the programmes identified by the European Communities. Therefore, the United States considers that the European Communities is challenging this type of research.[354]

4.201 To sum up, the United States' arguments with respect to the magnitude of NASA R&D programs, are as follows. The United States has provided extensive evidence that the value of NASA's R&D contracts with Boeing are worth less than $750 million. In contrast, the European Communities has provided only one basis for its huge estimated figure – its own calculations. The United States points to three of the many flaws it alleges with these calculations. First, all of the European Communities' estimates rely on the proposition that NASA provides research contracts and facilities, equipment, and employees to Boeing in proportion to Boeing's share of U.S. civil aircraft production. However, all of the evidence before the Panel indicates otherwise.

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[351] Executive Summary of the United States' non-confidential closing statement at the second meeting with the Panel, para. 10.

[352] United States' response to question 352, para. 170.

[353] United States' response to question 352, para. 172.

[354] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 1.

Second, the European Communities has done nothing to adjust its calculations in response to the evidence presented by the United States on how much NASA actually spent, and on what the contracts actually provided. Third, the European Communities estimates include the value of research that even the European Communities concedes should be left out, such as air traffic management topics. As for alleged provision of facilities, equipment, and employees, NASA has reviewed its electronic records, and determined estimated values for many of the NASA facilities, equipment, and employees provided under the non-reimbursable or partially reimbursable SAAs for which such information was unavailable in hard copy. These data indicate that the value of such SAAs was approximately $83 million – not the large amount suggested by the European Communities.[355]

DOD

DOD RDT&E Program

4.202 The United States submits that U.S. DOD conducts research, development, testing, and evaluation activities to develop weapons and other systems to advance its ability to protect U.S. national security. DOD personnel conduct many of these activities themselves at the DOD's many research facilities. The United States adds that DOD also contracts with private manufacturers, private research laboratories, and universities to conduct research into topics of interest to DOD. One such contractor is Integrated Defense Systems ("IDS"), the Boeing division responsible for defense contracting activities. BCA, the division that produces large civil aircraft, is not a party to these RDT&E contracts. [356]

4.203 According to the United States, the European Communities' argument that these contracts with IDS for military research actually convey benefits to BCA's production of large civil aircraft rests on two unsupported (and incorrect) assertions: (i) that DOD "funding for LCA-related R&D activities through what they call 'contracts' . . . are in reality grants to Boeing/MD for LCA-related R&D expenses",[357] and (ii) that "Boeing is not required to pay anything in return for this RDT&E funding".[358] This framing of the claim creates a fictitious measure – DOD funding of "dual use" research that provided "nothing in return" to the U.S. Government.[359] No such programme exists or existed. The United States considers that the European Communities uses this fiction to disregard reality, which is fatal to its claims:

(a) DOD contracts with IDS to engage in explicitly military research that is of interest to DOD and advances the U.S. national defense objectives, generally to design more advanced weapons or other defense systems or to reduce the cost of such systems.

(b) DOD tasks Boeing scientists to perform work defined by DOD, receives voluminous data and scientific reports on the outcome of that work, and receives the right to convey the research results to any other company for use on any government project.

(c) DOD remuneration to Boeing for this contracted research is subject to an elaborate legal regime and rigorous government auditing and enforcement to ensure that the government is not overpaying for the services received.

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[355] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 11.

[356] Executive Summary of the United States' first written submission, para. 8.

[357] Executive Summary of the United States' first written submission, footnote 9 referring to European Communities' first written submission, para. 457.

[358] Executive Summary of the United States' first written submission, footnote 10 referring to European Communities' first written submission, para. 765.

[359] Executive Summary of the United States' first written submission, footnote 11 referring to European Communities' first written submission, para. 766.

In short, the United States submits that under the DOD contracts at issue, DOD purchases research and development services, and does so for a market-based price. Under the SCM Agreement, government purchase of services is not a financial contribution. Even, assuming *arguendo* that purchase of services was a financial contribution, the European Communities can point to no evidence that the U.S. Government paid more than adequate remuneration for those services. Therefore, the United States argues that there is no subsidy.[360]

4.204 The United States points out that the European Communities seeks to bypass these fundamental, and insurmountable, problems by calling the contractual payments at issue "grants". However, in refusing to grapple with the reality of the government payments at issue, the European Communities fails to make a prima facie case that the measures meet the three criteria for an actionable subsidy: financial contribution, benefit, and specificity.[361] Therefore, the European Communities' extended allegations of so-called "dual use" technology or knowledge transfer are besides the point, as they do not and cannot manufacture a subsidy from underlying transactions that confer neither a financial contribution nor benefit to Boeing. In any event, according to the United States, the European Communities' "dual use" assertions fail even by their own terms – they rest on a false premise that DOD's military research is designed to assist the civilian sector, they ignore the severe technological and legal limitations on the use of military technology for civil aircraft, and they ascribe to Boeing a use of military-origin "knowledge" that is inconsistent with Boeing's own practice and U.S. law.[362]

4.205 First, the United States elaborates on what it considers to be the false premise of the European Communities' argument: DOD has indeed in the past funded limited research on "dual use" technologies. But the European Communities misrepresents the nature of the programmes. "Dual use" from DOD's perspective involves leveraging commercial technology for military purposes. The explicit design and objective is not to move resources to the civil sector, but rather to move resources from the civil sector to the military sector. Therefore, according to the United States, the European Communities has the flow backwards.[363]

4.206 Second, the United States points to the technological realities behind the European Communities' argument: the European Communities ignores fundamental technological differences between military and civilian missions and requirements, i.e. that DOD procures research to fulfill military functions, which differ in important ways from the needs of commercial aircraft. It points out that military aircraft carry only pilots or soldiers (but are increasingly unmanned), often fly at supersonic speeds, must evade radar, survive bullet holes and land in rocky deserts or thick jungles, and drop paratroopers and/or cargo. In contrast, civil aircraft carry commercial passengers (including demanding, and high revenue-generating, first-class passengers), fly only at subsonic speeds, are required to be seen on radar, and land at busy hub airport runways. The technologies that allow military aircraft to do their mission are expensive – and unnecessary – for a commercial aircraft. Thus, even items that are "potentially" or "theoretically" useful to large civil aircraft are not what aircraft designers or aircraft customers consider either commercially viable or feasible.[364]

4.207 Third, the United States emphasizes the legal limitations that undermine the European Communities' argument: because of their military nature, technologies developed under a DOD contract will generally be included in the U.S. Munitions List, which results in the imposition of stringent controls under ITAR on the export and transfer of any resulting defense articles and technical data related to those articles. The United States asserts that these restrictions make it

[360] Executive Summary of the United States' first written submission, para. 9.
[361] Executive Summary of the United States' first written submission, para. 10.
[362] Executive Summary of the United States' first written submission, para. 11.
[363] Executive Summary of the United States' first written submission, para. 12.
[364] Executive Summary of the United States' first written submission, para. 13.

effectively impossible to use controlled technologies on large civil aircraft because, by their nature, the aircraft can potentially fly anywhere, including to countries proscribed by U.S. law, regulation and policy from receiving access to U.S. defense articles and technical data. As a result, Boeing has a policy of excluding the use of ITAR-controlled articles and technical data on its large civil aircraft, and has developed rigorous internal procedures to ensure that this does not occur. The United States submits that Boeing applied this policy to the 787, the aircraft the European Communities alleges was aided most by DOD RDT&E activities, to ensure that the 787 incorporates only technologies with a proven civil origin.[365]

4.208 Additionally, the United States maintains that even if the European Communities had succeeded in demonstrating that there was a feasible civil use for knowledge Boeing obtained during performance of a DOD contract, such a use would not satisfy any of the criteria for finding a subsidy. It is not a financial contribution. Nor is there a benefit. The United States considers that the existence of knowledge synergies between different business units of a company does not confer a benefit. Such knowledge is, like any other experience that a commercial actor develops in the course of its business, a normal part of commercial relationships.[366]

4.209 In response to the European Communities' statement that it is interested only in "the portion of DOD RDT&E support that benefits Boeing's commercial division", the United States points to the fact that the European Communities has conceded that all of DOD research projects, even the so-called "dual use" projects, have a military purpose. As Adm. Ginman explained, DOD pays only for that military purpose. The United States asserts that once that military purpose is taken into account, there is no "portion" of the DOD RDT&E left that could go to civilian uses.[367]

4.210 The United States asserts that, in paying Boeing to conduct research, DOD did not, as the European Communities claims, get nothing in return for its money. In fact, it obtained valuable technology and information for military purposes. The United States notes that at one point, the European Communities concedes that this is the case, but claims, contrary to the evidence on the record, that much of the research has "dual uses" that advance Boeing's production of large civil aircraft. In this context the United States recalls that "dual use" means the adaptation of civil technologies for military usage – not the other way around, as the European Communities asserts. It further recalls that DOD research focuses on capabilities that are not relevant to civil aircraft. Finally, even if some DOD-funded research had a theoretical applicability to large civil aircraft, U.S. export control laws make use of any resulting technology on large civil aircraft a practical impossibility. Thus, there is no basis to conclude that DOD research was a financial contribution or provided a benefit with regard to Boeing's large civil aircraft. The United States also notes that the European Communities has greatly exaggerated the magnitude of the programmes it challenges.[368]

4.211 In its further written submissions the United States maintains its claim that the European Communities failed to establish the existence of a financial contribution in respect of DOD's RDT&E. The United States contends that in its first written submission it showed that all of DOD contracts with Boeing had a military objective, and that in exchange for payments, Boeing employees performed research work to government specifications and delivered the results to DOD. The United States points out that the European Communities does not dispute that DOD received "some value" under these contracts. In short, according to the United States, despite the European Communities' rhetoric, it is forced to admit that the RDT&E contracts represented an

[365] Executive Summary of the United States' first written submission, para. 14.
[366] Executive Summary of the United States' first written submission, para. 15.
[367] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 3.
[368] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 2.

exchange of value between DOD and Boeing, which would make them a purchase. The United States argues that that should end the inquiry, as the contracts make clear that what DOD purchased was Boeing's RDT&E services, a transaction that is not a financial contribution within the meaning of Article 1.1 of the SCM Agreement.[369]

4.212 However, in the United States' view, the European Communities attempts to avoid this consequence by asserting that the military purpose is "irrelevant" because the "issue in this dispute" is "the portion of DOD RDT&E support that benefits Boeing's commercial division". The United States contends that this assertion is wrong on two levels. In the first place, the European Communities' theory mixes two concepts that are separate under the SCM Agreement – financial contribution and benefit. The identification of a financial contribution under Article 1.1(a)(1) depends on the type of the transaction that allegedly confers a subsidy. The question of whether there is a benefit comes only after the establishment of a financial contribution. Thus, the United States submits that the European Communities' assertion that technologies researched under some contracts have civil application is irrelevant to a determination of whether the contracts convey a financial contribution in the first place.[370]

4.213 Second, the United States recalls that the European Communities is challenging R&D services that it believes result in "dual use" technologies. It is not challenging two distinct transactions. The United States considers that research performed (and, for that matter, any technologies generated) cannot be artificially divided into a portion done for military purposes and a portion done for civil purposes. Accordingly, the United States argues that the European Communities cannot challenge any alleged civil portion of the research contract as something that DOD separately conveys to Boeing, discrete from the military portion of the research contract, and that the Panel can analyze in isolation from its military applicability.[371]

4.214 Likewise, the United States argues that the European Communities failed to establish the existence of benefit. It posits that even if the Panel were to find that the RDT&E contracts gave rise to a financial contribution, the contracts confer no benefit because Boeing performed valuable research and delivered valuable results to DOD, and DOD paid only for the work directed to its own objectives. Thus, any payment to Boeing was no more than adequate remuneration for what Boeing did, which, under the analysis provided in Article 14(d), establishes that the payments do not confer a benefit.[372] The European Communities does not dispute that the agency received "some value" under these contracts. However, it does not address whether that "value" was worth less than what DOD paid. According to the United States, that, by itself, represents a failure on the part of the European Communities to meet its burden of proof, and requires rejection of its assertion that a benefit exists.[373]

4.215 Taking issue with the European Communities' assertion that the larger part of the value of each contract was a "benefit to Boeing's LCA division" because "Boeing ultimately used a significant portion of those funds for its own benefit", the United States points out that the European Communities provided absolutely no evidence for this assertion in its first written submission or in its first oral statement. Moreover, the United States provided evidence that the opposite is true. Each contract specifically describes DOD's goal, and lays out the work that the contractor will perform to achieve that goal. Boeing has no latitude to change the work itself. Rather, modifications must be agreed to by DOD, subject to negotiations and revisions in the amount of the payment. Where the parties agree that the work carries some benefit to Boeing, DOD uses a vehicle

[369] Executive Summary of the United States' second written submission, para. 15.
[370] Executive Summary of the United States' second written submission, para. 16.
[371] Executive Summary of the United States' second written submission, para. 17.
[372] Executive Summary of the United States' second written submission, footnote 1.
[373] Executive Summary of the United States' second written submission, para. 18.

(such as a cooperative agreement, other transaction, or technology investment agreement) that requires Boeing to make its own monetary contribution to the project, and provides no allowance for a profit. The United States contends that the government maintains detailed and voluminous regulations designed to ensure that contractors charge only for expenses related to performance of their contracts. Thus, the United States submits that the evidence shows that DOD defined the work for Boeing to perform and paid only for what Boeing actually did.[374]

4.216 Turning to the European Communities' argument that the United States has made "unsupported assertions" about "the impact of competitive bidding, the United States responds that it did not think it would be necessary to explain that competition is likely to produce lower prices that reflect the actual value of the transaction.[375] In fact, DOD finds that competition yields many benefits to the government, even where the competition results in cost-reimbursement-type contracts. Among these benefits are:

(a) participation by all offerors able and interested in satisfying the government's needs;

(b) availability to DOD of various and innovative approaches to satisfying the government's needs; and

(c) uninflated estimates of cost due to the presence of competition.

The United States asserts that when cost-reimbursement contracts are awarded, DOD's contract management processes ensure it reimburses contractors for costs incurred only if those costs meet standards of allocability, allowability, and reasonableness.[376] In summary, the United States submits that competition is important to the effectiveness of DOD's R&D efforts.[377]

4.217 The United States next argues that the European Communities failed to establish the specificity of the alleged subsidies. It posits that if the Panel finds that the RDT&E contracts are a financial contribution, the United States has made a contingent argument that the subsidies alleged by the European Communities are not specific. The European Communities argues, without any supporting information, that "entities capable of carrying out the types of activities enumerated in DOD's regulations" constitute a "group of entities or industries". However, the United States' first written submission demonstrated that DOD contracts for RDT&E on a large variety of topics, with thousands of enterprises, in a large number of industries. The United States submits that the European Communities has provided no information or argument to support a conclusion that this diversity of enterprises and industries is sufficiently discrete so as to be considered "specific".[378]

4.218 In addition, the United States argues that the European Communities failed to support its calculation of the amount of the alleged financial contribution. Also, the United States notes that the European Communities attempts to estimate the amount spent on research into so-called "dual-use technologies" that it considers to be a financial contribution and treats this amount as equal to the magnitude of the alleged benefit. As such, the United States submits that the European Communities' calculations are superficial, self-contradictory, and contrary to the evidence. More specifically, according to the United States, the evidence of "dual use" was based on nothing more than mere references to generic scientific terms that indicated nothing about whether the research in question

[374] Executive Summary of the United States' second written submission, para. 19.
[375] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 12.
[376] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 13.
[377] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 14.
[378] Executive Summary of the United States' second written submission, para. 20.

had a civil use, that the evidence was self-contradictory in that the very evidence on which the European Communities relied, proved that the estimated value of the programs in question were inflated by at least five to seven times, and probably by a greater amount, and that they were contrary to the evidence in that DOD research into "dual use technologies" aims to convert civil technologies to military use, and not the other way around, as the European Communities claims.[379]

4.219 Finally, the United States submits that the allegations that Boeing "used" DOD-funded technology in large civil aircraft are unproven and irrelevant to a finding as to whether there was a financial contribution, a benefit, or specificity. The United States notes that the European Communities has devoted much of its presentation on DOD RDT&E to assertions that Boeing "used" technology funded under DOD contracts on large civil aircraft, and that Boeing developed "knowledge, experience, and confidence" working on DOD projects. As the United States argues it had pointed out in its first written submission, these assertions are irrelevant to a determination whether RDT&E contracts are a specific subsidy. The contention regarding "use" of DOD technologies in large civil aircraft is not true, a point to which the United States will return later. The United States claims that even if it were true, the existence of synergies between different divisions of an enterprise would be completely commercial in nature. Such synergies are one of the primary reasons that enterprises combine with other enterprises. The United States further contends that the development of "knowledge, experience, and confidence" by employees (and enterprises) is also the result of any commercial transaction. Therefore, the fact that Boeing employees added to their professional skills while working under DOD contracts (or the European Communities allegations that large civil aircraft used DOD-funded technologies) proves nothing about whether the contracts themselves were more advantageous to Boeing than the market would provide. To the contrary, the United States submits that these are completely normal commercial outcomes, and when arising in connection with a payment that is not otherwise a subsidy, do not transform the payment into a subsidy.[380]

4.220 In short, the United States argues that:

(a) DOD contracts are not a financial contribution. DOD contracts are purchases of services for purposes of Article 1.1(a)(1). Research and development are services, a point that the European Communities has not disputed. DOD paid money for the services, which had value to DOD, another proposition that the European Communities does not contest. Therefore, there is a purchase of services – a type of transaction that is not a financial contribution for purposes of the SCM Agreement.[381]

(b) DOD contracts do not confer a benefit. The European Communities asserts that "a commercial entity, particularly an entity with the market power of DOD, would never pay for R&D costs that are known to also relate to a good other than the good being purchased". This is demonstrably false. For example, clients routinely pay law firms for the full cost of legal research, even though they know that the firm may subsequently use the results of that research in its representation of other clients on unrelated matters. The European Communities also disregards the effect of competition between Boeing and the many other companies that supply RDT&E services to DOD. Where there is competition, the fact that Boeing won the contract means that DOD has concluded that Boeing's offer best meets the criteria that the solicitation establishes as the basis for the award. In this situation, even if DOD

[379] Executive Summary of the United States' second written submission, para. 21.
[380] Executive Summary of the United States' second written submission, para. 22.
[381] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 3.

knows Boeing has a commercial use for a technology that may result from the research, it would be completely contrary to commercial practice for DOD to choose one of the less valuable bids.[382]

(c) Magnitude. The evidence demonstrates that the European Communities' estimate of the value of research into allegedly dual use technologies vastly exaggerates any actual value. In particular, for two of the areas analyzed by the European Communities, the estimates were between twice and eight times the actual values. The European Communities argues that the Panel should disregard this pattern of exaggeration because the 17 comparisons are a "small sample size". But if an analysis shows that a methodology is consistently wrong for one group, expanding the methodology to encompass a much larger group of contracts does not make it right.[383]

4.221 DOD facilities, equipment, and employees. When DOD allows use of its facilities, equipment, or employees for the purpose of performing an RDT&E project, it is not "providing" them to a contractor. It is providing them to itself, for use to advance its own objectives. Thus, there is no financial contribution within the meaning of Article 1.1(a)(1). Perhaps more important, any benefit associated with DOD facilities and equipment used under an RDT&E contract cannot be evaluated independent of the contract because those assets form part of the basis of the exchange. A contractor that has to supply facilities will charge more than a contractor that has access to DOD facilities. That will influence the price that it is willing to accept for the work.[384]

DOC

DOC Advanced Technology Program

4.222 The United States submits that the European Communities' challenge to the DOC programme known as the ATP lacks merit because ATP is a broad-based, non-specific programme. ATP assists a broad range of companies in funding early-stage, high-risk research and turning it into innovative technologies that could deliver broad-based economic rewards for the United States as a whole. ATP does not fund the development of particular products, but supports early-stage enabling technologies that are essential to the development of new products, processes, and services across diverse application areas.[385]

4.223 The United States argues that ATP has funded 768 projects in a broad array of technology areas that extend across the fields of advanced materials and chemicals, biotechnology, electronics, computer hardware, communications, information technology, and manufacturing. ATP does not target specific companies or institutions to receive funding or participate in projects; these entities participate in ATP of their own initiative. The selection of ATP projects is done on a peer-reviewed, competitive basis and is subject to established selection criteria.[386]

4.224 The United States asserts that Boeing participated in eight ATP projects as a member of a consortium, rather than on its own, and received an amount of funding that is trivial in comparison with the cost of developing and producing large civil aircraft. The ATP funding that Boeing received

[382] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 4.
[383] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 5.
[384] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 6.
[385] Executive Summary of the United States' first written submission, para. 32.
[386] Executive Summary of the United States' first written submission, para. 33.

is not an actionable subsidy because it was not specific to Boeing. ATP is an extremely broad programme that provides funding to a diverse array of industries and technology sectors. The authorizing legislation does not limit eligibility to certain enterprises, which means that it is not *de jure* specific pursuant to Article 2.1(a) of the SCM Agreement. Furthermore, the United States considers that ATP is also not de facto specific under Article 2.1(c).[387]

4.225 In its further submissions, the United States maintains that the European Communities has failed to establish that any alleged subsidy is specific within the meaning of Article 2 of the SCM Agreement. The European Communities argues that ATP is specific because ATP funding is limited to those companies that perform research into 'high-risk, high pay-off, emerging and enabling technologies'. However, according to the United States, such a limitation does not amount to a limitation to a group of enterprises or industries within the meaning of Article 2.1 of the SCM Agreement. If "certain enterprises" in Article 2.1 captured as broad a range of companies as those that could conduct "high-risk, high pay-off, emerging and enabling technologies", then it is difficult to conceive of eligibility criteria for R&D funding that a Member could devise that would be non-specific. In addition, the broad range of sectors that have received ATP funding demonstrates that ATP is not specific. Specifically, ATP has funded 768 projects that cover a range of sectors that includes advanced materials and chemicals, biotechnology, electronics, computer hardware and communications, information technology, and various types of manufacturing. The United States submits that because ATP funding is not specific under the SCM Agreement, it is not an actionable subsidy.[388]

4.226 In sum, the United States maintains its argument that the DOC's ATP is not an actionable subsidy because it is not specific. The European Communities claims that ATP is specific because the programme funds "high risk, high pay-off emerging and enabling technologies". But, this "group" that the European Communities attempts to fabricate is artificial and has no basis in logic. Moreover, ATP is broadly available throughout the U.S. economy, and in fact, an extremely wide range of enterprises and industries has participated in ATP.[389] Thus, under the ATP, the DOC makes grants to a wide swath of U.S. industries, and accordingly, this programme is not specific and not an actionable subsidy.[390]

(ii) NASA/DOD intellectual property right waivers/transfers

4.227 Noting that the European Communities asserts that the U.S. Government "transfers" or "waives" patent and data rights to its government contractors, and that this alleged transfer conveys a benefit specific to Boeing, the United States submits that the European Communities is wrong on all counts. It explains that under U.S. law, an inventor is the initial holder of the rights to a patentable invention. This rule holds true whether the inventor conceives the patentable invention independently, under contract to a private partner, or under contract with the government. Thus, the question in a government contract, is not whether the government will "transfer" or "waive" patent rights, but is instead what rights the government receives as part of the exchange of value under the contract, and what rights the inventor retains. Since the contracts themselves are subject to competitive bidding, or procurement rules designed to achieve a result equivalent to competitive bidding, the resulting allocation of patent rights is consistent with market considerations. Moreover, the United States emphasizes that the ultimate assignment of patent rights that the European Communities attacks is, in fact, the general rule under U.S. government contracting law

[387] Executive Summary of the United States' first written submission, para. 34.
[388] Executive Summary of the United States' second written submission, para. 46.
[389] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 17.
[390] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 7.

and, therefore, is not specific. As for data rights, the United States asserts that concept of "waiver" is not applicable. It goes on to argues that data rights may be licensed, but the European Communities has not made any claims in this regard.[391]

4.228 The United States contends that the treatment that the European Communities challenges arises only when a private party enters a contract with the U.S. Government, and thus is part of the overall deal between an agency and its contractor. Under U.S. law, patent rights accrue to the inventor. The IP clauses in a government contract confer certain rights on the government, not the contractor, to use inventions or data conceived by the contractor during performance of the contract. These rights are an important part of what the government obtains under its R&D contracts. The rights retained by contractors are not given for free, but are part of an overall commercial transaction.[392]

4.229 The United States notes that the European Communities devotes most of its analysis to selective quotations regarding the policy underlying U.S. rules for the attribution of rights in patents conceived by persons working under contracts with the government. It recognises that the European Communities is correct that 30 years ago, the United States had a general policy of taking all rights to patents conceived under government contracts, and then granting nonexclusive licenses to any applicant that wished to use a patent. It further recognises that the European Communities is also right that 27 years ago, as a result of the Bayh-Dole Act, the United States changed its general policy to allow contractors to retain their patent rights, while the government would acquire only those patent rights it needed. The government rights take the form of a license to use the patent for any "government use", which includes use of the patent by any government contractor engaged in government business. The key point, in the United States' view, is that it was a general policy, available to any contractor under any contract with any agency. It further argues that in the parlance of the SCM Agreement, the patent rules are not specific.[393]

4.230 The United States considers that the European Communities tries to create the appearance of non-specificity by noting that NASA achieves this result by "waiving" patent rights that would otherwise accrue to the agency by operation of law. (The United States observes that for historic reasons, NASA's statute grants it full title to patentable inventions made by a contractor under a contract with NASA.) However, the European Communities disregards that the "waiver" process is simply the way that NASA executes the government-wide policy of allowing contractors to retain rights to patentable inventions they make while working under a government contract. The substantive outcome is the same.[394]

4.231 In response to the European Communities' claim, the United States first argues that the allocation of IP rights under U.S. government contracts cannot be analyzed independently of the contracts that generate those rights. The United States notes that the European Communities attempts to treat the disposition of IP rights under NASA and DOD contracts as autonomous acts – "waivers" or "transfers" by those agencies – ignoring the fact that the treatment it challenges occurs only through a contract, as part of an overall exchange of value between the government and private parties. The United States argues that by taking one element – the retention of patent rights by the private party – out of the context of the overall exchange, the European Communities attempts to create the

[391] Executive Summary of the United States' first written submission, para. 28.
[392] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 5.
[393] Executive Summary of the United States' first written submission, para. 29.
[394] Executive Summary of the United States' first written submission, para. 30.

impression that the government has bestowed something on the private party for free, when in fact the government pays for rights that it obtains from its contractor.[395]

4.232 Next, the United States claims that the European Communities' assertion that the government conveyed IP rights to Boeing reverses what actually occurred – that Boeing conveyed IP rights to the government. More specifically, the United States contends that the allocation of patent rights under U.S. government contracts is not a financial contribution at all, because there is nothing for the government to contribute – under U.S. law, any rights in a patent belong in the first instance to the inventor. Therefore, the only transfer of rights under a government contract is the license that the contractor grants to the government. There simply is no transfer of patent rights from the government to the contractor. The United States notes that in its oral statement, the European Communities did not dispute that the general rule under U.S. law is that the inventor has the first right to any patents he or she makes. Instead it simply ignored this rule, and focused on other laws and regulations that do not tell the whole story.[396]

4.233 Furthermore, with regard to DOD, the United States notes that the European Communities argues that 35 U.S.C. § 202(a) (part of the Bayh-Dole Act), as applied to medium and large businesses pursuant to a 1983 Presidential Memorandum, "provides that it is DOD that ultimately decides who will own a patent". The United States submits that this statement is wrong. Section 202(a) sets out a general rule (which can be called the Bayh-Dole rule) explicitly apportioning rights to patents for inventions made under government contracts – the contractor may retain title to the patent, while the government receives a "government use" license to use those inventions free of charge. This standard applies to all contractors, without regard to size or status as a university or other nonprofit entity. Thus, it is the acquisition rules and general patent law, rather than any agency, that "ultimately decides" who owns a patent made under a government contract by a contractor employee. [397]

4.234 With regard to NASA, the United States notes that the European Communities quotes section 305(a) of the Space Act, which acts as an exception to the general rule under U.S. patent law that an invention is owned by, and a patent issued to, the inventor or assignee of the inventor. As the U.S. Court of Customs and Patent Appeals ruled, "Section 305 clearly treats an invention as property, the right to which is in the inventor or his assignee unless the invention was made (conception or first actual reduction to practice) in the performance of a work under a NASA contract". The Section 305 exception to the issuance of a patent to the inventor or his assignee is limited, in that the NASA Administrator has discretion not to assert (or to "waive") patent rights that might accrue to the government. As noted in the United States' first written submission, in accordance with the 1983 Memorandum, NASA issued regulations that have resulted in the waiver of its patent rights every time a contractor has requested. Through this mechanism, NASA allocates patent rights between agency and contractors in a manner substantively identical to what DOD and other agencies do.[398]

4.235 The United States considers that the European Communities has provided no support for its assertion that the allocation of patent rights under U.S. government contracts is more advantageous than is available in the market. The United States asserts that, in its first written submission, it demonstrated that the standard government patent rights clauses form part of a bargain struck at arm's length between an agency and a contractor. The European Communities has provided no evidence to suggest that the transaction was not at arm's length, or otherwise inconsistent with market practices. The United States therefore submits that the European Communities has failed to make a prima facie case of the existence of a benefit.[399] Noting nonetheless that in its oral statement, the

[395] Executive Summary of the United States' second written submission, para. 37.
[396] Executive Summary of the United States' second written submission, para. 38.
[397] Executive Summary of the United States' second written submission, para. 39.
[398] Executive Summary of the United States' second written submission, para. 40.
[399] Executive Summary of the United States' second written submission, para. 41.

European Communities contended that this treatment is "contrary to what market participants would have negotiated at arms-length according to relevant market benchmarks", the United States argues that the European Communities has provided no support for this assertion.[400]

4.236 The United States also disagrees with the European Communities' observation that because the generally applicable rules for allocating patent rights under government contracts were applied by DOD and NASA, those rules are specific. The United States contends that in its first written submission, it demonstrated that the application of the Bayh-Dole rule to government contracts is *de jure* non-specific because the government employs objective criteria to determine eligibility: whether a contract involves experimental, developmental, or research work, which any enterprise in any industry may perform. Similarly, the rules are not specific under Article 2.1(a), because both the law and the 1983 Presidential Memorandum make access to this treatment available to all government R&D contractors, without limitation to a specific enterprise or industry or group of enterprises or industries.[401] The United States notes that the European Communities does not take issue with any of these points. Instead, it simply asserts that, because the European Communities is challenging only NASA and DOD contracts, the generally applicable Bayh-Dole rules under 35 U.S.C. § 202(a) are "irrelevant to the analysis required under Article 2.1". The overarching error with the European Communities' theory is that it focuses on two granting authorities – DOD and NASA – without regard to the activities of other agencies, thereby creating an appearance of limited access where there is none.[402] The United States recalls that the European Communities also alleges that Boeing and the five top U.S. defense contractors receive "disproportionately large amounts" of IP rights. The term "disproportionately" suggests a comparison with some larger group, which both the United States and the European Communities term the "baseline group". The United States rejects the European Communities' assertion that the proper comparison for disproportionality is the entire U.S. economy. The United States maintains its view above that the European Communities' interpretation of disproportionality is incorrect as a legal matter.[403]

4.237 Thus, the United States maintains that the allocation of patent rights and data rights is part of the bargain that the government strikes with its contractors, usually through a competitive bidding process. As the United States has shown above, the bargain resulted in the purchase of services for no more than adequate remuneration. Assuming *arguendo* that such a purchase can be a financial contribution, a position with which the United States disagrees, the adequacy of remuneration establishes that there is no benefit.[404]

4.238 In short, the United States submits that:

(a) There is no financial contribution. Under U.S. law, patent rights to any invention accrue in the first instance to the inventor. Thus, there is a chain of provision of those rights from the inventor to the employer and, potentially, from the employer to other parties. This is true also under government contracts, so there is no "provision" of patent rights from the government to the contractor and, accordingly, no financial contribution.[405]

(b) There is no benefit. Any treatment of IP rights is an integrated term of a contractual bargain between the agency and Boeing that is negotiated at arm's length, typically

[400] Executive Summary of the United States' second written submission, para. 42.
[401] Executive Summary of the United States' second written submission, para. 43.
[402] Executive Summary of the United States' second written submission, para. 44.
[403] Executive Summary of the United States' second written submission, para. 45.
[404] Executive Summary of the United States' first written submission, para. 31.
[405] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 15.

after competitive bidding. The European Communities' view of the situation is also incorrect. First, the U.S. Government does not allow the researcher to retain "full rights" to the IP created – the contracts require the contractor to provide a free "government use" license to the government. Second, the United States has provided evidence that commercial companies do enter into contracts under which they pay other entities to perform research, and those entities retain rights to the IP created. Thus, the European Communities has failed entirely to meet its burden of proof to establish the existence of a benefit.[406]

(iii) NASA/DOD IR&D/B&P Program

4.239 The United States asserts that the IR&D and B&P reimbursements are a mechanism that U.S. government contracting law uses to ensure that government contractors get what suppliers in the commercial marketplace get – a payment that covers their indirect costs of doing business. IR&D is "independent" in the sense that the contractor undertakes the R&D for its own account, independent of a request from the customer. It is the military analog to the R&D lines that both Airbus and Boeing show on their financial statements for their civil aircraft operations. B&P consists of costs that the contractor undertakes in preparing documents to seek government business. Its commercial sector analog is in selling expenses that companies treat as a subtraction from revenue.[407]

4.240 The United States explains that where the U.S. Government buys a product at the price set by the commercial market, IR&D and B&P are not "reimbursed". They are subsumed in the payment, just as in any commercial transaction. However, for many goods or services the government buys, there is no set commercial price. In these situations, the U.S. Government may determine what to pay by calculating the cost to the supplier of supplying the good or service and adding a "fee" that allows the supplier to register a profit. In these situations, the IR&D and B&P costs allocable to the good or service are part of the cost calculation. When the government pays for the good or service, part of its payment "reimburses" those IR&D and B&P costs.[408]

4.241 The United States takes issue with the European Communities' contention that Boeing includes BCA expenses in its IR&D and B&P costs and thereby charges the government for costs associated with large civil aircraft. The United States argues that the European Communities provides no support for this assertion. Moreover, if Boeing incurs IR&D or B&P costs that relate to civil aircraft activities, government accounting rules would require allocation of a portion of those costs to the civil aircraft division (namely, BCA). IR&D and B&P are only reimbursed by the U.S. Government pursuant to cost-based contracts. The United States asserts that BCA has no such contracts and, accordingly, receives no such reimbursements.[409] In any event, the United States highlights that even assuming *arguendo* that the U.S. IR&D and B&P rules conferred a benefit, they are not specific, as they are available to all contractors with the U.S. Government in all sectors.[410]

4.242 The United States submits that the European Communities has failed to establish that DOD or NASA IR&D or B&P reimbursements covered research for large civil aircraft. The European Communities has provided no credible evidence that NASA or DOD actually included research related to large civil aircraft research in IR&D and B&P reimbursements. The United States argues that the European Communities' assertion that the agencies conveyed "financial contributions worth $3.1 billion to Boeing's LCA division" rests instead on another assertion, that there are "several

[406] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 16.
[407] Executive Summary of the United States' first written submission, para. 24.
[408] Executive Summary of the United States' first written submission, para. 25.
[409] Executive Summary of the United States' first written submission, para. 26.
[410] Executive Summary of the United States' first written submission, para. 27.

examples of such dual-use technologies developed by Boeing, for which Boeing likely received reimbursement in whole or in part through the U.S. Government's IR&D/B&P Program". These examples, in turn, rest on the conclusion by the European Communities' consultants that the relevant rules would allow IR&D/B&P reimbursements for large civil aircraft research, and that Boeing engaged in projects that could have qualified if Boeing in fact sought reimbursement.[411] The United States argues in response, that it showed in its first written submission that the rules and regulations related to IR&D and B&P reimbursements and commercial competitiveness considerations prevent Boeing from treating large civil aircraft research as IR&D or B&P expenses. In fact, Boeing's own accounting rules require that research expenses be separated into separate accounts for research on IDS products only, research on BCA products (that is, large civil aircraft) only, and research applicable to the products of multiple units (known as the "common enterprise overhead" account). The expenses of any true dual use IR&D projects would go into the common enterprise account, which, according to Boeing, was worth only **[[***]]** in 2003. They are then allocated to each segment (including BCA), with DOD reimbursing only the costs that are allocated to IDS and subsequently to IDS's cost-based contracts with DOD. The European Communities concedes that such treatment would ensure that DOD did not pay for dual-use IR&D related to large civil aircraft.[412]

4.243 According to the United States, the European Communities attempts to support its contention that IR&D reimbursements cover large civil aircraft research costs by noting that DOD changed its IR&D eligibility standard in 1991, with the result that, in the words of one report, "military relevance is no longer demanded". However, the European Communities neglected to quote certain critical findings in that report. One such finding goes to the motive for the changes:

> "critics argued that there was no need to have government imposed IR&D ceilings. In their view, IR&D spending would be self-limiting. If a firm put too much money into IR&D . . . then the firm's overhead would rise and it would become non-competitive."

Thus, the goal was to lessen DOD control over contractors' IR&D decisions, and use competition to control IR&D spending, not to make IR&D reimbursements available for research into topics of civil interest. The report, which was issued in 1997, also made findings about how contractors reacted to the IR&D reform. It demonstrates that what the European Communities characterizes as a "relaxation" of controls on the type of research eligible for IR&D projects had no such effect. To the contrary, contractors focused on research of immediate interest to DOD, and away from long-term projects with broader potential benefits. Contractors did not use the new standard to add non-defense or dual-use technologies to their claims for IR&D or B&P reimbursement (as the European Communities asserts) but "are generally working in the same technical areas as before the changes". Thus, the United States submits that in fact, not only is IR&D focused more on military projects, the total value of IR&D reimbursements decreased markedly after the 1992 introduction of the new standard.[413]

4.244 The United States also claims that IR&D and B&P reimbursements do not convey a benefit because they reflect costs included in market prices paid by commercial customers. The United States notes in this connection that in its oral statement, the European Communities did not dispute that companies routinely factor R&D costs and selling expenses into their prices. Nor did it dispute that IR&D and B&P costs reflect such expenses. Instead, the European Communities asserted that

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[411] Executive Summary of the United States' second written submission, para. 31.
[412] Executive Summary of the United States' second written submission, para. 32.
[413] Executive Summary of the United States' second written submission, para. 33.

> "an entity operating pursuant to market considerations would not agree, and would certainly not actively seek, to reimburse independently incurred costs of companies because those costs "{e}nhance the industrial competitiveness of the U.S. or '{s}trengthen{} the . . . technology base of the United States."[414]

This statement, according to the United States, contains two fallacies. First, the European Communities overstates the importance of the "enhance the industrial competitiveness" and "strengthen the technology base" objectives. The IR&D report cited by the European Communities indicates that more immediate and concrete objectives are the focus of IR&D projects. Second, Boeing's large civil aircraft division routinely engages in research that enhances the industrial competitiveness of the United States and strengthens the technology base of the United States. Its commercial customers, both U.S. and foreign, know that this cost is built into the price they pay for large civil aircraft, and that BCA could not continue to develop new products if it could not recover these costs.[415]

4.245 Finally, the United States rejects the European Communities' proposition that because the generally applicable IR&D and B&P rules were applied by DOD and NASA, IR&D and B&P reimbursements are specific. The United States contends that the European Communities simply asserts, without explanation, that the United States "failed to rebut" its arguments because of an "erroneous understanding of Article 2.1(a)" and "ignoring of the granting authorit{ies} issue". The United States explains the overarching error with the European Communities' theory – that by focusing on two granting authorities – DOD and NASA – without regard to the activities of other agencies, the European Communities attempts to create an appearance of limited access where there is none. In the United States' view, application of the relevant provisions of the SCM Agreement to IR&D/B&P payments further demonstrates the error of the European Communities' arguments.[416]

4.246 The United States contends that IR&D and B&P reimbursements by DOD and NASA are not separate payments to contractors. They are indirect costs or overheads, which are normal costs of doing business incurred by a company, but not related to particular transactions. The United States asserts that the government must cover these sorts of costs in the prices it pays, or commercial suppliers will not do business with it. Thus, it submits that there is no benefit and no specificity.[417]

4.247 In short, the United States submits that:

(a) Reimbursement of IR&D and B&P costs is not a separate financial contribution. These expenses bear no relationship to particular contracts. Instead, they arise from and relate generally to a company's ability to do business with government and non-government customers. In short, they are not independent transactions between the U.S. Government and its contractors. They are part of the price that an agency pays for goods or services that it purchases from private enterprises. The United States contends that it has shown that the inclusion of indirect costs in the price of a good or service is standard, and the European Communities has provided no factual support for its assertions to the contrary.[418]

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[414] Executive Summary of the United States' second written submission, para. 34.
[415] Executive Summary of the United States' second written submission, para. 35.
[416] Executive Summary of the United States' second written submission, para. 36.
[417] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 4.
[418] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 12.

(b) IR&D and B&P reimbursements do not confer a benefit. DOD regulations require the outcome that the European Communities identifies as conferring no benefit to large civil aircraft – proportionate sharing of any "dual use" IR&D between the company's civil and military operations.[419]

(c) Magnitude. The European Communities assumes that all of Boeing's IR&D expenses related to dual-use technology and, therefore, should be split proportionately between civil and military transactions. In fact, even by the European Communities' inflated estimates, dual-use technology accounted for less than ten per cent of DOD's total RDT&E activity for the 1991 to 2006 period. The European Communities provides no basis for the assertion that the dual-use share of IR&D expenses would be ten times higher.[420]

(iv) NASA/DOD facilities, equipment and employees

4.248 The United States argues that facilities, equipment, and employees under NASA contracts are not a subsidy. The situation in this regard is the same as with DOD contracts – any facilities, equipment, and employees are for the agency's objectives, not the contractor's own use. Thus, they are not a financial contribution, and they cannot be severed from the overall transaction.[421]

4.249 With respect to the European Communities' assertion that NASA provided goods and services to Boeing for less than adequate remuneration in the form of work performed by NASA employees or use of NASA facilities, the United States makes an observation that under U.S. law, NASA provides such services only pursuant to agreements under SAAs, which require the private participant to provide a "fair and reasonable" contribution to NASA in return for any services supplied by the agency. In fact, a review of NASA's SAAs with Boeing shows that the company provided the government adequate remuneration for the services supplied, which, according to the United States, means that the arrangement did not confer a benefit within the meaning of the SCM Agreement.[422]

4.250 As such, the United States submits that facilities, equipment, and employees under SAAs are not a subsidy. The European Communities has never provided any reason to conclude that the amounts paid by Boeing under reimbursable SAAs represented less than adequate remuneration for the facilities, equipment, or employees provided by NASA. As for "non-reimbursable" SAAs the European Communities has nowhere effectively rebutted the demonstration in the U.S. first written submission that these instruments provide just what NASA's rules require – that "the respective contributions of each Agreement Partner must be fair and reasonable compared to any NASA resources to be committed, NASA program risks, and corresponding benefits to NASA". In short, the European Communities has provided no support for its contention that the provision of facilities, equipment, or employees under SAAs confers a benefit.[423]

(v) DOL 787 worker training grants

4.251 According to the United States, and contrary to the European Communities' portrayal, a very small U.S. Department of Labor grant awarded to Edmonds Community College pursuant to the High

[419] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 13.
[420] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 14.
[421] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 9.
[422] Executive Summary of the United States' first written submission, para. 22.
[423] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 10.

Growth Job Training Initiative, did not in fact provide a subsidy to Boeing. The United States explains that the High Growth Job Training Initiative was created to help workers take advantage of job opportunities in high growth, high demand, and economically vital sectors of the U.S. economy. The initiative applies to 14 broad industry sectors, such as biotechnology, energy, financial services, health care, and information technology, that cover much of the U.S. economy. Pursuant to this initiative, the DOL has awarded over 150 grants to a wide range of entities across the United States for a diverse array of topics.[424]

4.252 In this context, the United States confirms that the Edmonds Community College received one such grant, in the amount of approximately $1.5 million, for the development of an advanced manufacturing curriculum with broad applicability to various industries. However, this grant did not provide a subsidy to Boeing because Boeing did not benefit from it because it was not used to provide training to Boeing employees, as the European Communities alleges, nor was the grant specific under Article 2.1. The United States argues that the DOL grant is not *de jure* specific to Boeing because these grants are not explicitly limited to "certain enterprises", but are broadly available across 14 diverse industry sectors and may be used for a variety of purposes across many sub-sectors. The grants are also not de facto specific because they have been distributed across the 14 different industry sectors, with aerospace receiving far fewer grants than other industries. Furthermore, the curriculum that Edmonds Community College developed relates to skills that cut across a wide range of manufacturing industries and is in no way limited to the aerospace sector.[425]

C. PROHIBITED SUBSIDIES

1. Arguments of the European Communities

4.253 The European Communities makes two claims in this respect. First, the European Communities asserts that it demonstrates that the FSC/ETI and successor act subsidies are contingent in law upon export performance, within the meaning of Article 3.1(a) of the SCM Agreement, and therefore inconsistent with U.S. obligations under Article 3.2. These measures are contingent in law upon export performance because the measures themselves provide that their tax exemptions and exclusions are available only with respect to "foreign trade income", which arises from property sold for use outside the United States. Indeed, WTO panels and the Appellate Body have repeatedly found these tax breaks to constitute WTO-incompatible export subsidies.[426]

4.254 Second, the European Communities argues that the State of Washington's HB 2294 tax incentives are contingent in fact upon export performance, within the meaning of Article 3.1(a) of the SCM Agreement, and therefore inconsistent with U.S. obligations under Article 3.2. It further asserts that HB 2294 itself was contingent on the siting of a "significant commercial airplane final assembly facility in Washington state" that could produce "at least thirty-six superefficient airplanes {i.e. 787s} a year". Expert analysis by Mr. Andrew Gordon, Airbus' Head of Market Analysis and Research, demonstrates that "it is highly unlikely that Boeing could sustain a production rate of 36 787 aircraft per year for the U.S. market alone". The European Communities also observes that only companies manufacturing commercial airplanes and components thereof, which are generally destined for export, may benefit from the HB 2294 tax incentives. As such, the HB 2294 tax incentives are contingent in fact upon export performance.[427]

4.255 In response to the United States' argument that Washington State's HB 2294 subsidies are not prohibited export subsidies, since HB 2294 does not require the production or export of any LCA and

[424] Executive Summary of the United States' first written submission, para. 35.
[425] Executive Summary of the United States' first written submission, para. 36.
[426] Executive Summary of the European Communities' first written submission, para. 39.
[427] Executive Summary of the European Communities' first written submission, para. 40.

since Boeing's alleged need to export LCA is irrelevant, the European Communities observes that it generally agrees with this proposition, on condition that this analysis is consistently applied in WTO case law. In the alternative, however, the European Communities emphasizes that one of the essential preconditions for HB 2294 was clearly a precondition in respect of the actual or anticipated exports. This leads the European Communities to the conclusion that HB 2294 is a prohibited export subsidy. The European Communities further argues that the United States has also failed to show that the U.S. market could absorb 36 787s per year – i.e. the production capacity required to make HB 2294 effective.[428]

4.256 Recalling the United States' position in terms of the export subsidy measures, the European Communities expresses a view that during the first Panel meeting the United States effectively admitted that the B&O tax rate reductions in HB 2294 result in a subsidy contingent on export. Specifically, the European Communities argues that the United States confirmed that the value of the HB 2294 subsidy increases when export sales of aerospace products increase. In short, it confirmed that HB 2294 violates Article 3.1(a) of the SCM Agreement. The European Communities also argues that the United States accepted that the continuing FSC/ETI tax regime is a prohibited export subsidy, to the extent received by Boeing.[429]

4.257 The European Communities reiterates in its second written submission that the United States does not dispute the conclusion that the FSC/ETI and successor act subsidies are contingent in law upon export performance and therefore inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.[430]

4.258 The European Communities further maintains that the United States has failed to successfully contest the European Communities' prima facie case that the subsidies provided by Washington State through HB 2294 are prohibited subsidies inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement. The European Communities recalls that the United States effectively admitted at the first meeting of the Panel that the HB 2294 B&O tax rate reductions are prohibited export subsidies, and its defence with respect to HB 2294 as a whole rests on an inconsequential distinction between production and production capacity.[431]

2. Arguments of the United States

4.259 With respect to FSC/ETI, the United States confirms that it does not dispute that FSC/ETI has been found to be a financial contribution that confers a benefit, and is specific, nor does it contest the European Communities' estimate of FSC/ETI benefits related to large civil aircraft during the 1989 to 2006 period. But, relying on the certified statements by Boeing's officers, the United States argues that Boeing ceased receiving FSC/ETI benefits as of December 31, 2006. Accordingly, the United States considers that with regard to any claims of threat of serious prejudice, FSC/ETI benefits should not enter into the analysis. As the European Communities' sole claim with regard to FSC/ETI in this dispute is that it provided a subsidy to Boeing's production and development of large civil aircraft, the United States argues that there is no need for the Panel to make any finding with regard to application of FSC/ETI in any other sectors. Moreover, the United States notes that in the adverse

[428] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 12.

[429] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 14.

[430] Executive Summary of the European Communities' second written submission, para. 44; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 21.

[431] Executive Summary of the European Communities' second written submission, para. 45; Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 21.

effects section of its submission, it further demonstrates that FSC/ETI benefits did not cause adverse effects to the interests of the European Communities.[432]

4.260 The United States argues that the European Communities' claim that FSC/ETI measures and successor legislation is contingent in law on export performance is superfluous and provides no basis for the Panel to make a finding or render a recommendation.[433] The DSB has ruled that this is the case, and has recommended that the United States bring those measures into compliance with the SCM Agreement. Another finding that they are export contingent or another recommendation that they be brought into compliance with the SCM Agreement will add nothing to the force or effect of the earlier rulings or recommendations.[434]

4.261 The United States concedes that critical facts on this topic are not in dispute. It does not contest that FSC/ETI was an export subsidy. The European Communities does not contest that Boeing has stated that it will not use that subsidy after the 2006 tax year. Instead, the United States points out that the European Communities focuses on a memorandum issued by an Associate Chief Counsel of the U.S. Internal Revenue Service with regard to the eligibility for FSC/ETI benefits in some circumstances. As evidence, that general evaluation should not supersede the conclusion reached by Boeing with regard to its specific tax situation that it will not use that subsidy in the future. In addition, the European Communities has disregarded that the memorandum itself states that "{t}his advice may not be used or cited as precedent".[435]

4.262 The United States notes that, in addition to claiming that the tax measures enacted by the State of Washington pursuant to a piece of legislation known as HB 2294 are actionable subsidies, the European Communities also asserts that these tax measures are prohibited subsidies under Article 3.1(a) of the SCM Agreement. The United States submits that the European Communities' claim that these Washington State tax measures are contingent on export performance has no merit. The plain language of HB 2294 makes clear that its tax incentives are in no way tied to actual or anticipated export performance.[436] More specifically, the United States argues that the European Communities erroneously claims HB 2294 did not become effective until the State of Washington signed an agreement with a commercial airplane manufacturer to locate a manufacturing facility in the State that will produce 36 superefficient airplanes, such as the Boeing 787, per year. The United States points out that the European Communities then asserts that Boeing could not sell 36 such airplanes domestically and that, consequently, the HB 2294 tax measures are de facto export-contingent. In fact, to become effective, HB 2294 only required that a manufacturing facility with the capacity to produce 36 superefficient airplanes be located in the State. The United States asserts that actual production quantities were irrelevant. As such, HB 2294 is in no way tied to actual or anticipated exportation or export earnings – the standard under Article 3.1 for finding a prohibited de facto export-contingent subsidy.[437]

4.263 As such, the United States requests the Panel to note that there is no evidence to support the assertion that the Washington state tax measures under HB 2294 were export-contingent subsidies. The measure challenged by the European Communities was to become effective upon the state and "a manufacturer of commercial airplanes" signing "a memorandum of agreement regarding an affirmative final decision to site a significant commercial airplane final assembly facility in Washington state". However, the United States asserts that the measure, HB 2294, does not require

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[432] Executive Summary of the United States' first written submission, para. 37.
[433] United States' response to question 58, para. 163.
[434] United States' response to question 58, para. 164.
[435] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 6.
[436] Executive Summary of the United States' first written submission, para. 53.
[437] Executive Summary of the United States' first written submission, para. 54.

that 36 airplanes per year actually be produced; it simply requires that the assembly facility have the capacity to do so.[438]

4.264 The United States goes on to argue that even if HB 2294 were a subsidy, it is not a prohibited export subsidy under the SCM Agreement. It notes that the European Communities' claim of export contingency is based primarily on the fact that HB 2294 requires the construction of an assembly facility with the capacity to produce 36 superefficient airplanes annually. The European Communities seems to assume that a tie to the establishment of production capacity is equivalent to a tie to actual or anticipated exports. However, it provides no evidence to support this equation. The United States contends that the European Communities merely incorrectly asserts that the U.S. market cannot absorb 36 superefficient airplanes per year, stresses that Boeing is export oriented, and relies on what it calls a "correlation" between exports and HB 2294. But these assertions fail to establish export contingency.[439]

4.265 In sum, the United States argues that the European Communities continues to advance the remarkable claim that the tax treatment in HB 2294 is a subsidy and that provision of this alleged subsidy is de facto contingent upon export performance under Article 3 of the SCM Agreement. However, the European Communities has failed to establish what is required under the SCM Agreement i.e. that the State of Washington tied the granting of the tax treatment in HB 2294 to actual or anticipated exportation or export earnings.[440]

D. ADVERSE EFFECTS

1. Arguments of the European Communities

(a) Overview of arguments

4.266 The European Communities argues that the U.S. federal, state, and local subsidies benefiting Boeing's LCA division cause Airbus to lose billions of dollars in revenue, resulting in serious prejudice, including a threat thereof, to the interests of the European Communities.[441] It argues that in the 2004-2006 reference period alone, the U.S. subsidies total over $5 billion, and cause Airbus to lose $27 billion in revenue. It further argues that the subsidies in question already cause adverse effects to the European Communities because they violate the specific commitments of the United States undertaken in a bilateral agreement concluded with the European Communities in 1992. In addition, these subsidies cause significant price suppression and significant lost sales in the world market, and displacement and impedance of Airbus' sales in the U.S. and certain third country markets, including a threat thereof, within the meaning of Articles 5(c), 6.3(a), 6.3(b), and 6.3(c) of the SCM Agreement. Moreover, the European Communities argues that additional revenue losses amounting to billions of U.S. dollars were caused prior to 2004, and will be caused in 2007 and thereafter, as Airbus delivers LCA booked at suppressed prices during the 2004-2006 period. These

[438] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 13. See also, Executive Summary of the United States' second written submission, para. 52. The United States argues that, as a threshold matter, the European Communities has failed to establish that HB 2294 constitutes a subsidy within the meaning of Article 1 of the SCM Agreement. Therefore, it cannot be a subsidy contingent on export performance.

[439] Executive Summary of the United States' second written submission, para. 53.

[440] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 22.

[441] Executive Summary of the European Communities' first written submission, para. 41.

revenue losses also mean that Airbus will have fewer funds to finance its aeronautics R&D needs in the future.[442]

4.267 The European Communities asserts that the U.S. subsidies have had two principal effects: (i) they have provided Boeing sales negotiators with millions of dollars to price down each Boeing LCA in sales campaigns against Airbus;[443] this cash flow was readily available to Boeing when it decided, in 2004, to price down its LCA to increase market share[444], forcing Airbus to lower its LCA prices and lose LCA sales to Boeing; and (ii) they have financed Boeing's development of the latest technology and production methods used on the 787[445], a technologically-advanced aircraft with first deliveries five years ahead of the A350XWB[446], further forcing Airbus to lower its LCA prices and cause it to lose LCA sales to Boeing in the 200-300 seat LCA market. While Airbus engineers have the technical expertise to compete evenly with Boeing, the European Communities asserts that Airbus cannot compete with the U.S. federal, state, and local treasuries, which, *inter alia*, finance R&D for Boeing LCA and offer Boeing significant tax breaks on the sale of its LCA.[447]

4.268 The European Communities contends that, reduced to its essence, this dispute is about Boeing using its U.S. subsidy benefits to win sales and suppress Airbus' prices. Increasing market-share to take advantage of cost reductions resulting from a steep learning curve and maintaining LCA production levels are as central to Boeing, as they are to Airbus. Thus, given the price- and value-sensitive nature of many sales campaigns between closely competing Airbus and Boeing products, Boeing has clear incentives to use its U.S. subsidy benefits at the expense of Airbus – Boeing's only competitor in the LCA markets.[448]

4.269 The European Communities develops two separate and independent complaints in this context, i.e. that the United States causes serious prejudice, and therefore adverse effects, to its interests, within the meaning of Article 5(c) of the SCM Agreement. Specifically, the United States causes serious prejudice to the interests of the European Communities because:

- it violates its specifically agreed obligations concerning support to the LCA sector pursuant to the 1992 Agreement; and

- the effects of the U.S. subsidies result in "significant price suppression" and "significant lost sales", and a threat thereof, in the world market, within the meaning of Article 6.3(c) of the SCM Agreement, as well as displacement and impedance in the U.S. and third country markets, and a threat thereof, within the meaning of Articles 6.3(a) and 6.3(b) of that Agreement.

The European Communities asks the Panel to make findings with respect to each of these two complaints in order to fully resolve the dispute between the parties.[449]

4.270 The European Communities, elaborating on the second complaint, explains that legalistic labels can mask the real scope of the harm caused to Airbus and the European Communities. Lost

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[442] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 13.
[443] Executive Summary of the European Communities' first written submission, para. 41.
[444] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 14.
[445] Executive Summary of the European Communities' first written submission, para. 41.
[446] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 14.
[447] Executive Summary of the European Communities' first written submission, para. 41.
[448] Executive Summary of the European Communities' first written submission, para. 42.
[449] Executive Summary of the European Communities' first written submission, para. 43.

Airbus sales today mean fewer jobs in the European Communities in the future. Lost sales and suppressed Airbus prices today mean lower available revenue in the future to finance Airbus' R&D and modernization of manufacturing equipment and techniques. The European Communities estimates that the total revenue lost by Airbus because of the effects of the U.S. subsidies was $27 billion during the 2004-2006 reference period.[450]

4.271 The evidence presented by the European Communities displays a consistent theme and goal – it demonstrates that Airbus lost sales or suffers from suppressed prices because the U.S. subsidies facilitated Boeing's offering of lower prices and its use of advanced technologies. But for the effects of the U.S. subsidies, Airbus would have won certain additional sales and Airbus' average LCA prices would be higher. These displaced, impeded, and lost sales, as well as suppressed prices, cause Airbus billions of dollars in lost revenue.[451]

4.272 The European Communities' claim of serious prejudice pursuant to Articles 5(c) and 6.3 of the SCM Agreement focuses on the effects of the U.S. subsidies in enhancing Boeing's ability to lower prices for its 787, 737NG, and 777 family LCA, and its ability to use advanced technologies on its 787 family LCA. The European Communities' claims are focused on the effects of U.S. subsidies benefiting Boeing's products in the world market, U.S. market, and third country markets where competition with Airbus takes place – i.e. in the markets for Boeing's subsidized (i) 787 family, (ii) 737NG family, and (iii) 777 family LCA that compete with Airbus' (i) A330 family/original A350 family/A350XWB-800, (ii) A320 family, and (iii) A340 family/A350XWB-900/-1000 LCA, respectively. It is in competitive campaigns involving LCA from these three Boeing LCA families that Boeing has the greatest incentive to use its U.S. subsidy benefits to lower its LCA prices. Further, it is in a variety of campaigns involving the 787 where Boeing's subsidy-fuelled technological advancements cause adverse effects.[452]

4.273 The European Communities contends in this connection that Boeing has, for decades, received billions of dollars in benefits from several different federal, state, and local U.S. subsidy programmes. The nature of these subsidies is to either reduce Boeing's marginal unit costs or increase its non-operating cash flow. Specifically, Boeing receives B&O tax rate reductions, 747 LCF landing fee waivers, and FSC/ETI subsidies that directly reduce its marginal unit costs related to the production and sale of LCA. The other subsidies (e.g. tax breaks and other incentives provided by the States of Washington, Kansas, and Illinois, and municipalities therein; R&D support provided by NASA, DOD, and DOC; IP right waivers/transfers provided by NASA and DOD; and worker training grants provided by DOL) reduce Boeing's costs, thereby increasing its non-operating cash flow. The European Communities argues that many of the U.S. aeronautics R&D programmes were specifically designed with Boeing's R&D needs in mind. They relieved Boeing of having to expend considerable resources of its own in researching and developing new LCA technologies. All of these subsidies lowered Boeing's costs of researching, developing, producing, and selling its 787, 737NG, and 777 family LCA.[453]

4.274 The European Communities argues that it demonstrates through its finance and accounting experts that between 2004-2006, the magnitude of the subsidies enjoyed by Boeing's LCA division was very large – i.e. on average, $1.7 billion per annum. This means that, on average between 2004-2006, the Boeing sales team had $4.6 million per 787 LCA, $2.4 million per 737NG LCA, and $5.5 million per 777 LCA to negotiate down prices.[454]

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[450] Executive Summary of the European Communities' first written submission, para. 44.
[451] Executive Summary of the European Communities' first written submission, para. 45.
[452] Executive Summary of the European Communities' first written submission, para. 46.
[453] Executive Summary of the European Communities' first written submission, para. 47.
[454] Executive Summary of the European Communities' first written submission, para. 48.

4.275 In addition, the European Communities relies on, *inter alia*, the work of an expert economist to demonstrate that during the 2004-2006 reference period, the U.S. subsidies caused Boeing's 787, 737NG, and 777 prices to be significantly lower. Given the close competition between Airbus and Boeing LCA, this, the European Communities submits, means that Airbus' prices were similarly forced lower due to these price effects of the U.S. subsidies.[455]

4.276 The European Communities' LCA market experts, Rod P. Muddle (former head of fleet planning for British Airways) and Christian Scherer (Executive Vice President of Airbus for Future Programmes and former deputy head of the commercial department for Airbus), testify as to the conditions of competition in the LCA markets. According to the European Communities, its market experts explain that the sales campaigns between competing Airbus and Boeing LCA are typically won by the manufacturer offering the best value to the customer, which is often driven by the lowest "net price". Specifically, in their experience, final offers by Airbus and Boeing can be very close in terms of their total value to the customer. This makes net price a critical factor in many sales campaigns, and highlights the significance of the financial benefits from the U.S. subsidies. The European Communities maintains that this close and intense competition between the two LCA manufacturers means that Boeing has an incentive to use its subsidies in competition with Airbus, and that Airbus is the only other entity whose LCA prices, sales, or market-share is lowered by the effects of the U.S. subsidies to Boeing.[456]

4.277 According to the European Communities, the evidence from certain individual sales campaigns involving Airbus and Boeing LCA demonstrate that the U.S. subsidies to Boeing's LCA division cause Airbus to lower its own LCA prices, and, in many cases, lose sales to Boeing. It argues that in the cases of lost sales, Airbus' final offer was often very close to the winning offer from Boeing. It also notes that the difference between the two offers was far less than both the magnitude of the U.S. subsidies available to Boeing and their price effects. The European Communities submits that, in specific sales campaigns, but for the U.S. subsidies, Boeing would have been forced to charge higher prices and, thus, would likely have lost those campaigns.[457]

4.278 With respect to the U.S. subsidies benefiting Boeing's 787 family LCA, the European Communities argues that these subsidies not only allowed Boeing to offer its 787 LCA at exceptionally low prices, but also played a key role in its early launch – in April 2004 – as a family of LCA that heavily uses composite materials and other new technologies. It asserts that the U.S. federal, state, and local subsidies allowed Boeing to price its 787 family LCA at the same price as, or even cheaper than, Boeing's old 767 family LCA, despite the 787's advanced technologies. Boeing developed these advanced technologies, in part, with the assistance of a number of NASA, DOD, and DOC R&D programmes, which funded, *inter alia*, Boeing's R&D related to the use of composites for large aeronautic structures. These U.S. aeronautics R&D subsidies allowed Boeing to accelerate the launch of the technologically-advanced 787 by several years and to deliver the first 787 in 2008, five years earlier than Airbus' competing A350XWB-800.[458]

4.279 The European Communities characterizes the effect on Airbus of the early launch of the heavily subsidized 787, in April 2004, as immediate and severe. Airbus' A330-200, launched only nine years earlier, was displaced, since the composites and other advanced technologies of the 787, which were developed with U.S. government assistance, offered significant operating cost savings over the older aluminium alloy technology found on A330 family LCA. Airbus attempted to compete in December 2004 with the expedited development of its original A350 family LCA, but without access to the same R&D support as Boeing, Airbus' original A350 family was unable to match the

[455] Executive Summary of the European Communities' first written submission, para. 49.
[456] Executive Summary of the European Communities' first written submission, para. 50.
[457] Executive Summary of the European Communities' first written submission, para. 51.
[458] Executive Summary of the European Communities' first written submission, para. 52.

technological advancements of the 787 and was therefore ill-received in the market. Consequently, Airbus' share of the world market for 200-300 seat LCA plunged from 85 per cent in 2003 to only 41 per cent by year-end 2006. When Airbus achieved sales of its A330 family and original A350 family LCA, it did so only at severely suppressed prices.[459]

4.280 The European Communities notes that it was not until July 2006 that Airbus, using its own resources, was able to offer the A350XWB-800 as a similar high-technology competitor to the 787. However, by this time, due to the subsidy-enabled early launch of the 787, Boeing had established a commanding market-share of orders in the 200-300 seat LCA market, locking in more than 360 orders for its 787 family LCA between April 2004 and July 2006. Airbus was not in the position to effectively compete for or secure those orders. Nor could Airbus promise customers that it could deliver a technologically innovative LCA in 2008. The European Communities argues that, had Boeing needed to develop the 787 using its own resources, the 787 would likely not have been launched any earlier than mid-2006, by which time Airbus would have been ready to compete with the A350XWB-800. Moreover, a non-subsidized 787, like the A350XWB-800, would have required a longer period before it could be delivered. Instead, Airbus was forced to play catch-up because of the U.S. subsidies.[460]

4.281 With respect to the U.S. subsidies benefiting Boeing's 737NG family LCA, the European Communities contends that during the 2004-2006 reference period, these subsidies allowed Boeing to significantly lower its 737NG prices, forcing Airbus to follow suit with prices for its own A320 family LCA. During this period, at a time of record demand for 100-200 seat single-aisle LCA, the U.S. subsidies allowed Boeing to change its pricing policy and drop the prices of its 737NG family LCA to record lows. The European Communities explains that in order to compete effectively and attempt to win orders for its A320 family LCA, Airbus was forced to similarly lower its prices, or risk losing significant market-share. The impact of Boeing's subsidy-enhanced pricing pressure is evident from developments in Airbus' A320 family pricing, as well as Airbus' lost sales and reduced market-share in the 100-200 seat single-aisle LCA market.[461]

4.282 With respect to the U.S. subsidies benefiting Boeing's 777 family LCA, the European Communities submits that these subsidies allowed Boeing to significantly lower its 777 prices, again forcing Airbus to follow suit with prices for its own A340 family LCA. At a time of record demand for 300-400 seat wide-body LCA, the U.S. subsidies allowed Boeing to change its pricing policy and drop the prices of its 777 family LCA to record lows. The European Communities reiterates that in order to compete effectively and attempt to win orders for its A340 family LCA, Airbus was forced to similarly lower its prices, or risk losing significant market-share. Nevertheless, Airbus' sales performance for its A340 vis-à-vis Boeing's 777 in 2004-2006 was very poor. Boeing's subsidy-enhanced financial strength caused Airbus to lose a significant number of A340 sales, and where Airbus was able to secure A340 orders, it could do so only at suppressed prices.[462]

4.283 In sum, the European Communities submits that the U.S. subsidies allowed Boeing to lower its prices for 787, 737NG, and 777 family LCA that were ordered during the 2004-2006 reference period (and that have already been delivered or will be delivered in the future); and they allowed Boeing to offer a technologically-advanced 787 with delivery slots as early as 2008 – five years ahead of the A350XWB-800. This is confirmed by the nature of the U.S. subsidies benefiting Boeing (i.e.

[459] Executive Summary of the European Communities' first written submission, para. 53.
[460] Executive Summary of the European Communities' first written submission, para. 54.
[461] Executive Summary of the European Communities' first written submission, para. 55.
[462] Executive Summary of the European Communities' first written submission, para. 56.

their structure, design, and operation), their magnitude, their estimated price effects, and the specific conditions of competition in the LCA markets.[463]

4.284 Thus, according to the European Communities, the U.S. subsidies negatively impact Airbus' past, present, and future sales of A320, A330, A340, original A350, and A350XWB family LCA. Specifically, these subsidies cause serious prejudice, and therefore adverse effects, to the interests of the European Communities in violation of Articles 5(c), 6.3(a), 6.3(b), and 6.3(c) of the SCM Agreement by means of:

- significant price suppression with respect to orders of Airbus' A330, original A350, A320, and A340 family LCA, or, in the alternative, threat of significant price suppression with respect to deliveries of those Airbus A330, A320, and A340 family LCA;

- significant lost sales with respect to orders of Airbus' A330, original A350, A320, and A340 family LCA, or, in the alternative, threat of significant lost sales with respect to deliveries of those Airbus A330, A320, and A340 family LCA;

- displacement and impedance with respect to orders of Airbus' A330, original A350, A320, and A340 family LCA, or, in the alternative, threat of displacement and impedance with respect to deliveries of those Airbus A330, A320, and A340 family LCA; and

- threat of significant price suppression with respect to orders of Airbus' A330, A350XWB, and A320 family LCA.[464]

4.285 In its second written submission, the European Communities reiterates that it has established that the U.S. subsidies at issue benefit the U.S. LCA industry and cause present adverse effects to European Communities' LCA-related interests, in violation of Articles 5 and 6.3 of the SCM Agreement. It further maintains that none of the U.S. assertions in the United States' first written submission or oral statements rebut the European Communities' prima facie showing of adverse effects. Rather, compelling and credible evidence demonstrates that, but for the U.S. subsidies, Boeing's commercial behaviour today, like in the past, would be very different. More precisely, the European Communities submits that, absent the U.S. subsidies, Airbus would not suffer significant price suppression, significant lost sales and impedance or displacement of its market share in particular country markets. The European Communities contends that finding any one of these situations to exist in any one of the three product markets at issue, or in any combination thereof, is sufficient for the Panel to find adverse effects.[465]

4.286 To sum up, the European Communities argues that, in its many submissions, exhibits and expert statements, it has presented extensive evidence of price and technology effects that result in the various forms of adverse effects. It submits that it has demonstrated in those submissions that billions of dollars in U.S. subsidies allowed Boeing, as a duopoly LCA producer, to lower its LCA pricing to win sales, increase its market share, and significantly suppress Airbus' pricing.[466] In addition, the European Communities submits that it established that U.S. subsidies have enabled Boeing to launch its products earlier and/or with more advanced technologies, causing competitive harm to Airbus. Specifically, decades of NASA, DOD, and other U.S. subsidies have enabled Boeing to launch the

[463] Executive Summary of the European Communities' first written submission, para. 57.
[464] Executive Summary of the European Communities' first written submission, para. 58.
[465] Executive Summary of the European Communities' second written submission, para. 46.
[466] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 14.

technologically-advanced 787 in early 2004, and deliver it in 2008, causing significant price suppression, lost sales and displacement or impedance.[467] The European Communities goes on to add that during the Panel's meeting with the parties, it also showed that technologies funded by U.S. subsidies were actually applied to the 787 – as the United States and Boeing elsewhere concede – but also demonstrated the essential value of knowledge gained by Boeing engineers through participation in NASA and DOD R&D programmes – knowledge not available, in any meaningful form, to Airbus. Further, the European Communities argues that it refuted the U.S. attempt to attribute adverse effects to Airbus' decision to develop the A380 or to alleged Airbus resource constraints with respect to the A350XWB.[468]

4.287 In addition, the European Communities comments on the U.S. assertions concerning the alleged "four pillars" of the European Communities argument. The European Communities contends that these pillars are purely a fiction created by the United States, ignoring the scope and depth of the argument and evidence underlying the prima facie case of the European Communities, while misstating its contentions. The European Communities expresses confidence that the Panel will ignore these false characterizations as it continues to review the many European Communities' submissions. Thus, it encourages the Panel to review carefully the actual evidence – and reject the U.S. repeated assertions about circumstances in those sales campaigns that did not occur.[469]

4.288 Finally, in response to the United States' assertion that "(t)he European Communities' does not deny that Airbus undercut Boeing's prices in key 2002-2004 sales campaigns", the European Communities points out that, indeed, the United States spent nearly half of its confidential statement on this point and that it simply repeats this statement, hoping it will become both true and relevant. But, the European Communities submits that it is neither. In its statement and in its written submissions and in responses to questions, the European Communities asserts that it has repeatedly contested and refuted this assertion. It submits that it has also demonstrated that such evidence nevertheless would not negate the significant price effects emanating from the U.S. subsidies during the reference period.[470]

(b) Causation test under Articles 5 and 6.3

4.289 The European Communities notes its agreement with the United States regarding the appropriateness of using a unitary "but for" causation approach and that the analysis of other, non-subsidy factors involves the assessment of whether they attenuate or even eliminate the causal link between subsidies and specific instances of serious prejudice.[471] Such an approach is supported by the panel and Appellate Body reports in *US – Upland Cotton*, where the Appellate Body criticized the panel for having adopted a bifurcated, rather than a unitary, approach to assessing significant price suppression.[472] In applying the unitary "but for" analysis, the European Communities argues it has taken into account current factual conditions and isolates the effect of the subsidies causing serious prejudice under those current factual conditions.[473]

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[467] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 15.

[468] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 16.

[469] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 19.

[470] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 22.

[471] United States' response to question 295, para. 506; European Communities' comments on United States' response to question 295, paras. 485-487.

[472] European Communities' response to question 370, paras. 191-195, 207-211.

[473] European Communities' response to question 287, paras. 583-603.

4.290 However, according to the European Communities, despite this basic agreement on a unitary "but for" approach to causation, the United States continues to misapply the counterfactual causation test under Articles 5 and 6.3 of the SCM Agreement, essentially adopting a bifurcated approach: The United States identifies certain actual harm with respect to certain Airbus LCA, in particular the A380, A340, and A350, and asserts that this harm was not caused by the U.S. subsidies. Yet, the harm identified by the United States is not the serious prejudice subject to the European Communities' claims and as such irrelevant.[474] At the same time, the United States posits that, generally, Airbus is not harmed. As the panel in *US – Upland Cotton* has already established, it is irrelevant to the European Communities' serious prejudice claim whether Airbus is suffering "material injury" in the sense of Article 5(a) of the *SCM Agreement*. Rather, the question is whether, *but for* the U.S. subsidies, Airbus' prices, sales, and market share would be higher. The evidence that the European Communities provided, demonstrates that they would be higher. [475]

4.291 As the European Communities has stated in its submissions, it considers that there might be a number of factors that explain actual pricing levels, sales volumes, and market shares in the LCA markets. Yet, the European Communities posits that whatever factors might have determined their actual level, a complaining Member needs to show only that prices, sales, and market share would be higher, but for the subsidies. That is, it need not show that its industry is materially injured, just that it would do better absent the challenged subsidies.[476]

4.292 While the European Communities agrees with the United States that a precise and definitive quantification of the magnitude and price effects is not necessary, the European Communities notes that it has provided evidence establishing the order of magnitude of both the challenged measures and their price effects. Accordingly, the European Communities considers that it has demonstrated a causal link between subsidization and serious prejudice.[477]

4.293 The European Communities takes issue with the U.S. response that Boeing's discounting is "normal competitive behavior". If the United States is saying that Boeing would have charged the same price even if it had not been subsidized, it is assuming the response to the very inquiry before this Panel. The European Communities argues that the United States must demonstrate the accuracy of that statement[478], noting that the U.S. attempt to do so consists of setting out its view of a financially unconstrained Boeing operating in a stylized perfect capital markets. According to the United States, any subsidies that Boeing received would either reduce its debt or would be paid to the company's shareholders. It follows that Boeing would make any investments it considers worthwhile, obtain financing from the capital markets for these investments, and then use any subsidy to repay debt or distribute it as dividends to shareholders. However, the European Communities argues that the U.S. arguments do not support its conclusion that these subsidies cause no effects. According to the European Communities, U.S. subsidies do influence Boeing's commercial behaviour in terms of pricing and product development. The European Communities posits that U.S. assertions that Boeing is financially unconstrained and could have replaced the U.S. subsidies by significantly reducing its compensation to shareholders and increasing its debt burden are entirely counter to economic logic. Boeing's shareholders would have balked at seeing their returns dramatically reduced to prop up an economically non-viable LCA business – thereby further limiting Boeing's ability to raise equity

[474] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 16.
[475] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 18.
[476] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 19.
[477] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 20.
[478] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 21.

capital. Even, if Boeing had chosen this economically untenable course and significantly reduced its compensation to shareholders by the amount of its $16 billion in share repurchases, the amount would have been insufficient to replace the approximately $19 billion in U.S. subsidies over the 1989-2006 period. Nor would it be financially tenable for Boeing to replace the U.S. subsidies with debt. The level of debt required would have resulted in an unsustainable debt burden. Ultimately, this burden would have threatened to render the company insolvent. Thus, even if Boeing could presently be characterized as financially unconstrained, this status is itself a consequence of the healthy returns the company generates due to the U.S. subsidies. Absent U.S. subsidies and a change in Boeing's behaviour, BCA would not be economically viable, generating no or only very limited profits. Yet, only economically viable companies can obtain funds from the capital markets, whether as debt or equity financing.[479]

4.294 With regard to the other causal factors advanced by the United States, the European Communities maintains that they do not undermine the European Communities' showing of adverse effects. The European Communities has adopted a unitary approach to establishing causation, following the same approach as the panel in *US – Upland Cotton (Article 21.5 – Brazil)*. The European Communities contends that it has established that, although other factors might have impacted the absolute level of prices and sales, Airbus prices would still have been significantly higher, and Airbus would still have won significant additional sales and market share, but for the U.S. subsidies.[480]

4.295 Making a final comment on "non-attribution", the European Communities observes, with respect to its lost sales claims, that the European Communities does not ignore non-subsidy factors in analysing those sales. Rather, it contends to demonstrate that but for the magnitude of the subsidised price effects, Airbus would have won the identified sales campaigns, where price (and not other non-price and non-subsidy factors) was the key factor. The European Communities recalls that it presents evidence from the sales campaigns showing that if Boeing's prices had been higher by the amount of the price effects, Airbus' last offer would have been economically more advantageous to the customer. The European Communities maintains that it also demonstrates lost sales by reason of the effects of technology.[481]

4.296 In its price suppression claims, the European Communities submits that it demonstrates that regardless of whether LCA prices rose or fell, the magnitude of the price effects coupled with Boeing's market power, opportunity, ability, and incentive to use those price effects, were significant enough to suppress Airbus' pricing. This is not assuming causation, but rather proving it. The various non-attribution factors, which the United States claims have caused LCA prices to fall, do not eliminate these significant suppressing effects on Airbus' pricing from Boeing's use of the subsidies. In the end, whether a "bifurcated" or "unitary" label is put on the causation analysis is not important. The European Communities posits that, what is important is whether the price effects caused by the price and technology mechanisms in the context of duopoly competition are of a significant enough magnitude to result in Airbus' pricing being lower than it otherwise should have been.[482]

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[479] European Communities' response to question 292, paras. 693-696; European Communities' second written submission, paras. 718-728.

[480] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 23.

[481] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 17.

[482] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 18.

BCI deleted, as indicated **[***]**

(c) Arguments relating to the reference period

4.297 The European Communities argues that 2004-2006 is a reasonable reference period reflecting today's conditions of competition. It contends that Articles 5 and 6.3 of the SCM Agreement require a demonstration of present adverse effects. The European Communities therefore focuses the evidence supporting its serious prejudice claims largely on the recent 2004-2006 period. The 2004-2006 reference period allows for an examination of the effects of the subsidies under conditions of competition that are sufficiently similar to the conditions of competition existing today. By comparison, the European Communities observes that the "historical" 2001-2003 period was so dissimilar from today's conditions of competition that it should not form part of the reference period. The European Communities contends that the dramatic effects of 9/11 transformed 2001-2003 into a "buyer's market", characterized by extraordinarily low demand. This, according to European Communities, is fundamentally different from today's "seller's market", where demand for LCA has exploded to record highs, and where both Airbus' and Boeing's product offerings have significantly changed.[483]

4.298 The European Communities emphasizes that through two causal mechanisms – price effects and technology (or product) effects – the European Communities has established its single claim that the U.S. subsidies at issue cause adverse effects in the three LCA product markets at issue (200-300 seat, single-aisle, and 300-400 seat). The European Communities claim relates to – and the Panel must assess – present adverse effects, and the legally and factually most relevant reference period is the four-year period from 2004-2007. Even if the Panel were to select a longer reference period, the evidence the European Communities has adduced demonstrates that the U.S. subsidies cause serious prejudice through price and technology (or product) effects.[484]

4.299 The European Communities further argues that the U.S. allegation that there is an absence of temporal coincidence between subsidy magnitudes and serious prejudice factors is not supported by the data.[485]

(d) Arguments relating to the effects of the U.S. subsidies

4.300 The European Communities submits that the United States' subsidies enable Boeing to charge lower LCA prices and invest in additional aeronautics R&D for future LCA launches.

(i) Type of subsidies and determinants of effects of the U.S. subsidies

4.301 The European Communities analyses the effects of subsidies on the market through product development, output and pricing by assessing three dimensions: (i) the nature of the subsidy (its structure, design, operation); (ii) its magnitude; and (iii) the context, particularly the financial condition of the recipient and the competitive condition in the market at issue. These three dimensions, however, cannot be assessed in clinical isolation; they are interdependent.[486] The European Communities emphasises that the United States abandoned its previous argument – advanced in its First Written Submission – that an assessment of the effects of a subsidy must be

[483] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 15.
[484] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 22.
[485] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 24.
[486] European Communities' comments on United States' response to question 391, para. 329; European Communities' response to question 379, para. 425.

based on the type of the financial contribution involved (e.g. grant, loan, tax reduction, etc.) and now agrees with the European Communities' framework of analysing the effects of the U.S. subsidies.[487]

4.302 The European Communities also asserts that the two U.S. consultants, Greenwald and Stiglitz, agree with its characterization of determinants of effects.[488] In an attempt at categorising different "types" of subsidies to assess their effects, these consultants base their report on the same three dimensions described in the previous paragraph. However, according to the European Communities, their report lacks analytical rigour, depth and precision. Greenwald's and Stiglitz's classification of subsidies is imprecise, tautological, overlapping in scope, and, therefore, redundant, as well as on different levels of abstraction.[489] Importantly, their report lacks a discussion of both the magnitude of the subsidy and other conditions of competition in the LCA markets, and ignores entirely the facts of this dispute.[490] By contrast, the analytical framework presented by the European Communities consistently since its first written submission accurately links context, nature and magnitude of the subsidies to their effects on product development, output and pricing in the markets at issue. The European Communities stresses that it views its own approach to examining the effects of the U.S. subsidies as appropriate, and considers that the Panel should adopt it for its own assessment.[491]

(ii) Nature of the United States' subsidies

4.303 The European Communities argues that the U.S. R&D subsidies have assisted Boeing in developing and bringing to market early certain innovative products, including the 787. In addition, all U.S. subsidies benefiting Boeing impact its LCA prices by operating in one of at least two broad ways. The European Communities submits that they either (i) provide additional non-operating cash flow that Boeing can invest in lower prices as well as additional R&D so as to lower its costs of research, development, production, and sale of 787, 737, and 777 family LCA; or (ii) directly reduce Boeing's marginal unit costs related to the production and sale of 787, 737, and 777 family LCA. The European Communities notes that during the 2004-2006 reference period, Boeing enjoyed $4.9 billion in benefits from U.S. subsidies increasing Boeing's non-operating cash flow, and $259 million in benefits from U.S. subsidies directly reducing Boeing's marginal unit costs.[492]

4.304 The European Communities further argues that the NASA and DOD R&D subsidies, including through support by NASA and DOD employees, provided Boeing with the knowledge, experience, and confidence to launch the 787 in 2004. The early timing of this launch allowed Boeing to seize market share and sales away from competing Airbus A330s, Original A350s, and the new A350XWB. With respect to NASA R&D subsidies, Mr. Willshire, Deputy-Director of the Aeronautics Research Directorate at NASA Langley Research Center, verified this when he explained: "(i)f NASA did not fund the research being questioned, the research results and breakthroughs would probably not be available today …". The European Communities observes that it could not have said it better itself. No Boeing 787s in their current form would be rolling off the

[487] European Communities' comments on United States' response to question 371, paras. 282-283.
[488] European Communities' response to question 379, para. 421.
[489] European Communities' comments on United States' response to question 391, para. 328; European Communities' comments on United States' response to question 389, para. 387; European Communities' response to question 379, paras. 423-426.
[490] European Communities' comments on United States' response to question 370, para. 341; European Communities' comments on United States' response to question 389, paras. 383-384; European Communities' response to question 379, para. 426; European Communities' response to question 380, para. 472.
[491] European Communities' comments on United States' response to question 391, para. 328; European Communities' response to question 380, para. 454.
[492] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 17.

assembly line in Boeing's facility in 2008 but for the NASA subsidies supporting Boeing's research into its critical technologies.[493]

4.305 The European Communities maintains that the structure, design, and operation of the U.S. subsidies, i.e. their very nature, support the European Communities' adverse effects claims. The European Communities notes that it established that all of the U.S. subsidies benefiting Boeing cause "price effects". That is, these subsidies cause Boeing to charge lower prices than the company would absent the subsidies. In addition, the European Communities argues that the U.S. R&D subsidies cause "technology" and "product effects". That is, the U.S. R&D subsidies allowed Boeing to launch technologically innovative products earlier, and sell them at a lower price than the company would otherwise have been able to. The European Communities addresses several U.S. arguments with respect to the nature of the subsidies at issue in its second written submission.[494]

4.306 At the outset the European Communities rebuts U.S. arguments regarding the aggregation of subsidies. The United States suggests an assessment of the nature of the U.S. subsidies based on four separate groups, classified according to the type of financial contribution involved. For the European Communities, the U.S. categorization is disconnected from the requirement of the SCM Agreement, directing the Panel to assess the U.S. subsidies in the light of their "nexus with … the particular effects related variable" at issue, i.e. Boeing's prices or Boeing's product offerings. By contrast, the European Communities submits that it has established that: (i) all of the U.S. subsidies at issue have the effect of freeing up cash at Boeing for use to price down aircraft; and (ii) the U.S. R&D subsidies have the independent and additional effect of accelerating Boeing's development of innovative technology for application on its LCA.[495]

4.307 The European Communities concludes that the evidence before the Panel demonstrates that all of the U.S. subsidies have a sufficient nexus with the price effects at issue. The European Communities also concludes that all of the U.S. R&D subsidies have a sufficient nexus with the technology and price effects at issue. It is, therefore, appropriate to aggregate all of those subsidies for purposes of assessing their effects.[496]

(iii) Magnitude of the U.S. subsidies

4.308 The European Communities states that between 2004-2006, Boeing's LCA division enjoyed, on average, $1.7 billion per annum in benefits from U.S. subsidies. This translates into an average of $4.6 million for each 787, $2.4 million for each 737, and $5.5 million for each 777 sold. The European Communities submits that these amounts are significant, whether viewed from the perspective of the total annual magnitude of the subsidies to Boeing's LCA division, or as the corresponding subsidization rates on a per-aircraft basis.[497]

4.309 The European Communities rejects the United States' claim that the U.S. subsidies to Boeing are very small and had no effect on the company's ability to gain a competitive advantage over its only competitor – Airbus. The European Communities contends that the United States reaches this conclusion by simply wishing away the overwhelming majority of U.S. subsidies, limiting its magnitude calculation to the one subsidy programme that it recognizes to constitute a subsidy – FSC/ETI. This, according to the European Communities, is simply implausible. The

[493] Executive Summary of the European Communities' non-confidential closing statement at the first meeting with the Panel, para. 23.
[494] Executive Summary of the European Communities' second written submission, para. 52.
[495] Executive Summary of the European Communities' second written submission, para. 53.
[496] Executive Summary of the European Communities' second written submission, para. 54.
[497] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 18.

European Communities' calculations demonstrate that in the majority of years, U.S. subsidies constituted well over 50 per cent of Boeing's net earnings, in many years even surpassing Boeing's net earnings.[498]

4.310 The European Communities contends that its demonstration of adverse effects caused by the U.S. subsidies benefiting Boeing flows from many factors. Yet, a simple assessment of the magnitude of the U.S. subsidies is sufficient to support such a claim.[499] The European Communities argues that the allocation methodology offered by it reveals very large magnitudes and high *ad valorem* subsidisation rates supporting the existence of adverse effects. The European Communities notes, for example, that in 2006 Boeing's LCA sold in competitive sales campaigns against Airbus benefited from an average $5.8 million for each 737, $13.6 million for each 777, and $11.1 million for each 787. This represents *ad valorem* subsidisation rates ranging from 11.07 per cent to 15.99 per cent. The European Communities submits that there is no rational basis to conclude that subsidies of such magnitude to a duopoly competitor do not have a significant impact on Airbus' prices, sales and market shares. Absent the U.S. subsidies and a change in its commercial behaviour, Boeing's LCA segment would not have been an economically viable entity. The European Communities demonstrates that from 1989 to 2006 the Boeing LCA segment would have generated an average return on invested capital significantly below its cost of capital. Such return would have been insufficient to justify its continued investment in LCA. Professors Whitelaw and Zarowin of New York University, by correcting the errors in the analyses proffered by 3 U.S. consultants – concerning (i) their failure to adjust operating earnings and the weighted average cost of capital consistent with their elimination of cash from invested capital; and (ii) the errors in their treatment of pension related gains and losses, assets and liabilities – demonstrate that BCA would not remain economically viable absent the U.S. subsidies and a change in its product development and pricing policies.[500] Thus, the available evidence confirms that the U.S. subsidies changed BCA's commercial behaviour.[501] The U.S. subsidies allowed BCA to offer its LCA at lower prices and to accelerate its product developments beyond what would otherwise have been economically viable. Lower prices and accelerated product development, in turn, cause significant price suppression, significant lost sales, and displacement and impedance of Airbus LCA.

4.311 The European Communities argues that had Boeing borrowed the total amount of the 1989-2006 U.S. subsidies from the capital markets to finance the same levels of investments, as the United States suggests it would have done, the company would have collapsed under a spiralling debt burden. In fact, ITR's calculations show that the financial markets would not have allowed Boeing to assume this amount of additional debt, or at least at anything but prohibitively high costs. An alternative, but equally economically untenable, course of action for Boeing would have been to significantly reduce its compensation to shareholders, turning the company into the previously discussed non-viable investment. However, even if Boeing had suspended dividends to shareholders in the order of $16 billion in share repurchases, the amount would have been insufficient to replace the approximately $19 billion in U.S. subsidies over the 1989-2006 period.[502] The European Communities considers that this evidence similarly demonstrates that, contrary to the U.S. assertions, Boeing would have had to change its commercial behaviour – i.e. charge higher prices and

[498] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 19.

[499] Executive Summary of the European Communities' second written submission, para. 47.

[500] European Communities' comments on United States' response to question 370, para. 244.

[501] European Communities' comments on United States' response to question 370, paras. 226-231; European Communities' response to question 378, paras. 350-353.

[502] European Communities' response to question 292, para. 694.

develop products later, or with less technological capabilities – had it not received the U.S. subsidies.[503]

4.312 The European Communities rebuts the unfounded U.S. criticisms of the ITR methodology for calculating the magnitude of the U.S. subsidies. This magnitude is based on U.S. countervailing duties methodology, and does not suffer from any of the flaws alleged by the United States.[504]

4.313 In its rebuttal, the European Communities emphasizes what it considers to be several of the more egregious U.S. misrepresentations of the European Communities' adverse effects argument and evidence. For one, the European Communities takes issue with the United States' assertion about the European Communities' claim that "the magnitude of the alleged subsidies is, in and of itself sufficient to prove the causal link between them and Boeing's prices …". In fact, as noted in its oral statement, and in its response to Question 84, the European Communities submits that the magnitude of the subsidy – in the light of Boeing's financial situation and expectations regarding the behaviour of a rational commercial entity – supports the inference that Boeing uses the subsidy to lower prices and/or invest in product development, thereby causing competitive harm to Airbus.[505] That said, the European Communities explains that the magnitude of the subsidies is only one piece of its causation evidence – working in combination with the European Communities' demonstration that the nature and magnitude of the U.S. subsidies confer on Boeing the ability to cause adverse effects; that Boeing's duopoly position in highly price-sensitive LCA markets gave Boeing the strong incentive to use the subsidies to price down its products; that competitive sales campaigns provide Boeing with the opportunity to use the subsidies to cause adverse effects; and that evidence regarding Boeing's use of other cost savings to lower price and gain market share, along with evidence of such behaviour by Boeing in LCA markets, supports the strong inference that Boeing uses the U.S. subsidies to lower its prices significantly. Thus, the U.S. attempt to misrepresent all of this evidence as merely a magnitude figure fails.[506]

(iv) Price effects of the U.S. subsidies

4.314 The European Communities reiterates that through the mechanism of price effects, the U.S. subsidies cause significant price suppression, significant lost sales, and displacement or impedance, or threat thereof, in the three LCA product markets at issue. First, the nature and magnitude of the U.S. subsidies confer on Boeing the ability to cause adverse effects. Second, the conditions of competition give Boeing the strong incentive to use the subsidies to price down its products. Third, competitive sales campaigns provide Boeing with the opportunity to use the subsidies to cause adverse effects. And fourth, Boeing actually uses its subsidies to price down its LCA.[507] With respect to Boeing's actual use of the subsidies, the European Communities explains that, absent the U.S. subsidies and in the light of its financial situation, no rational commercial actor, including Boeing Commercial Airplanes, would make the same pricing and product development decisions, even if it had the necessary financial resources. Moreover, the European Communities argues that it shows that, in any event, Boeing did not have the financial resources to make the same pricing and product development decisions. Finally, the European Communities contends that it also shows that Boeing regularly uses cost savings similar to those resulting from the U.S. subsidies to enable lower prices and to gain market share. Collectively, this evidence supports the strong inference that Boeing uses the U.S.

[503] Executive Summary of the European Communities' second written submission, para. 50.
[504] Executive Summary of the European Communities' second written submission, para. 51.
[505] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 20.
[506] Executive Summary of the European Communities' non-confidential closing statement at the second meeting with the Panel, para. 21.
[507] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 25.

subsidies to significantly lower its prices, thereby causing adverse effects to European Communities' LCA-related interests.[508]

4.315 The European Communities considers that since the U.S. subsidies are of sufficient magnitude to cause the claimed adverse effects, an inquiry into the precise amount of the price effects in this dispute is not required. Nonetheless, the European Communities offers additional evidence of price effects from the U.S. subsidies.[509]

4.316 With respect to the price effects of the U.S. subsidies, the European Communities explains that it provided the Panel with two alternative options to assess these. First, the European Communities has identified the per-aircraft magnitude of the U.S. subsidies, using an allocation methodology based on countervailing duty concepts. These values represent the per-aircraft subsidy magnitudes that provided Boeing with the ability to act on its incentives and opportunities to lower its prices in competition with Airbus. Further evidence shows that Boeing acted on that incentive. Second, the European Communities has provided evidence of a one-for-one price effect of those subsidies that reduce Boeing's marginal unit costs (or increase its marginal unit revenue), and in addition has provided a quantification of the price effects from subsidies that increase Boeing's non-operating cash flow based on an economic model developed by Luis Cabral, Professor of Economics at New York University's Stern School of Business.[510] The European Communities also argues that the U.S. subsidies enable Boeing to strategically set price and sales volumes in the world markets according to its commercial needs. Further, the subsidies cause Boeing to lower its prices by an amount that is roughly similar to the amount of subsidies. The European Communities contends that the U.S. arguments regarding Boeing's unconstrained access to financing fail to rebut these conclusions of Professor Cabral's model.[511]

4.317 In its second written submission, the European Communities recalls that it has considered the U.S. subsidies causing price effects in two sub-groups: (i) subsidies that reduce Boeing's marginal unit costs and (ii) subsidies that increase Boeing's non-operating cash flow by providing additional resources. For all the subsidies, Boeing executives admit that Boeing passes on cost savings to its customers.[512]

4.318 The European Communities maintains that the first group of subsidies lead Boeing to reduce its prices by the full magnitude of the subsidy because of its precise knowledge of the amount of subsidy available at the time of delivery of the aircraft, and the absence of any uncertainty with respect to the continued existence of that subsidy. In other words, Boeing was able to decrease prices by the full magnitude of the subsidies.[513]

4.319 The European Communities also contends that the United States incorrectly argues that the withdrawal of the FSC/ETI tax is evidence of Boeing's "uncertainty" regarding the availability of that subsidy, which, therefore, could not be reflected in Boeing's prices. The evidence and U.S. arguments in *US – FSC (Article 21.5 – EC)* demonstrate, however, that Boeing took FSC/ETI subsidies into account when pricing its aircraft. When discontinuing the FSC/ETI measures, the U.S. Congress felt compelled to specifically grandfather existing sales contracts, and even options for additional LCA orders that would be exercised under these existing contracts. As confirmed by the United States in

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[508] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 26.

[509] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 20.

[510] European Communities' response to question 378, para. 278.

[511] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 21.

[512] Executive Summary of the European Communities' second written submission, para. 55.

[513] Executive Summary of the European Communities' second written submission, para. 56.

US – FSC (Article 21.5 – EC), grandfathering provides foreign and domestic businesses with an opportunity to adjust and protect entities that might have altered their conduct in reliance on the long-standing tax treatment provided by the earlier law. Thus, the United States acknowledges that taxpayers came to rely on the FSC/ETI provisions in structuring their foreign transactions. Actions of the U.S. Congress and the U.S. IRS to protect the legitimate expectations of companies like Boeing, in the view of the European Communities, demonstrate that Boeing suffered no uncertainty concerning the availability of FSC/ETI subsidies for sales undertaken before the discontinuation of the measure. Similarly, with respect to the State of Washington and City of Everett B&O tax rate reductions, there is no uncertainty because the Project Olympus Master Site Agreement guarantees the economic value of these subsidies.[514]

4.320 With respect to the second group of subsidies, the European Communities also maintains that it demonstrates that such subsidies supplement Boeing's resources available for research, development, production and sale of the entire line of LCA product, thereby allowing cost savings which are passed through to customers in the form of lower prices. More precisely, the European Communities demonstrates that, contrary to the U.S. allegations, each of the U.S. subsidies has the price and technology effects the European Communities asserts because the U.S. subsidies either (i) reduce taxes, (ii) increase Boeing's technological capabilities and knowledge at no costs, (iii) reduce costs and improve competitiveness *vis-à-vis* Airbus thanks to NASA and DOD provision of R&D services, equipment, facilities and employees, (iv) decrease R&D expenses because of non reimbursement of BCA R&D. In addition, KDFA bonds allowed Boeing to receive more consideration from Spirit for its Wichita facility, while the Department of Labor grant to Edmonds Community College reduced training costs for Boeing's 787 workers. [515]

4.321 The European Communities next argues that it has demonstrated that Professor Cabral's model supports the European Communities' adverse effects claims. In a dynamic model of duopolistic competition, Professor Cabral quantifies the price effects – but not the technology effects – of those U.S. subsidies that provided Boeing with non-operating cash flow in the period between 1989 and 2006. Professor Cabral estimates that the total impact of each dollar of subsidy is 87.8 cents in price discounts, of which 59.0 cents result from aggressive pricing to move down the learning curve and to lock in potential repeat customers; and 28.8 cents from investments in R&D that result in better aircraft and lower prices on a price-per-quality basis. Professor Cabral estimates price reductions of $16.8 billion during the period of 1989-2022 that result from the $16.9 billion in U.S. subsidies during 1989-2006 – i.e. price effects of approximately the same magnitude as the amount of the subsidies.[516]

4.322 The European Communities explains that Professor Cabral's model adopts a standard approach to modelling economic behaviour and reflects the latest economic research. His approach properly balances the model's need for simplicity with the need to include and account for all relevant features that are crucial to the determination of how Boeing uses the U.S. subsidies. Importantly, the model builds on the main factors that characterise the LCA markets, including the price-sensitive nature of sales campaigns; the steep learning curves applicable to the production of LCA, which reward Boeing's higher levels of sales and market share with lowered production costs; the existence of non-negligible switching costs, which provide Boeing an incentive to price down aircraft today so as to be able to charge relatively higher prices in the future; and, the ability of LCA purchasers to quantify many of the qualitative differences between LCA features through the use of a net present value analysis. In addition, input variables of Professor Cabral's model are based on available Boeing data or reasonable estimates. An extensive sensitivity analysis, in which all parameters of the model

[514] Executive Summary of the European Communities' second written submission, para. 57.
[515] Executive Summary of the European Communities' second written submission, para. 58.
[516] European Communities' response to question 379, footnote 561.

are varied simultaneously, yields stable results, thus confirming the robustness of the Cabral Model against variations of key parameters and reinforcing the European Communities' claims.[517]

4.323 The European Communities considers that the U.S. criticism of that model rests largely on misinterpretations and mischaracterisations of Professor Cabral's analysis. In particular, the United States takes an overly simplistic view of the impact of imperfect capital markets, financial constraints and subsidy cash flow on that investment behaviour.[518] The U.S. allegations further are refuted by empirical evidence that provides strong support for Professor Cabral's model. In addition, some of the U.S. criticisms are contradicted by the United States' own consultants. According to the European Communities, none of the U.S. arguments invalidates Professor Cabral's findings, or the evidentiary value of those findings for establishing a causal link between the U.S. subsidies and adverse effects. The price effects determined by Professor Cabral, therefore, stand and support the European Communities' arguments and other evidence demonstrating the adverse effects caused by the U.S. subsidies.[519]

4.324 Further, the European Communities argues that in an examination of present adverse effects, the distribution of a subsidy over time is an important factor to consider when evaluating the effects of that subsidy. Specifically, the European Communities posits that a rational economic actor would take into account, at the time of order, anything that would impact the overall revenue and profitability of that order upon delivery – even though the sales price, and for that matter any other revenue such as subsidy revenue, is received only several years later. For example, in the light of the particular conditions of competition in the market for the product at issue, Boeing knows that a portion of its tax liability in 2010 will be foregone on revenue recognized in 2010 and can take into account that reduction when negotiating the sale of an aircraft. Hence, the European Communities submits that the structure and timing of transactions in this particular market enable present adverse effects from future committed subsidies, including those that derive from committed future tax breaks.[520]

4.325 With respect to the 787, the European Communities identifies some subsidies solely tied to that aircraft. According to the European Communities, the evidence demonstrates that certain tax exemptions provided by the State of Washington; most of the infrastructure, training, and other subsidies provided by the State of Washington and municipalities therein; bonds issued by the Kansas Development Finance Authority; R&D support provided by NASA through its ACT Program; and the worker training grant provided by the U.S. Department of Labor are tied to the 787.[521]

4.326 The European Communities submits that in many sales campaigns lost by Airbus the difference between Airbus' and Boeing's offers was far less than either the magnitude or the price effects of the U.S. subsidies. And, but for these billions in U.S. subsidies, Boeing would have been forced to charge higher prices, and, as a result, Airbus would have won additional sales and its overall LCA pricing for all orders that it booked during the reference period would have been higher. The European Communities concludes that given the price- and value-sensitive nature of many sales campaigns, and given the significant benefits of scale of LCA production, Boeing has strong incentives to target its U.S. subsidy benefits in competitive sales campaigns at the expense of its only competitor – Airbus.[522]

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[517] European Communities' response to question 376, para. 337; European Communities' response to question 383, para. 542.

[518] Executive Summary of the European Communities' second written submission, para. 59.

[519] European Communities' second written submission, paras. 754-756, 785.

[520] Executive Summary of the European Communities' second written submission, para. 60.

[521] Executive Summary of the European Communities' second written submission, para. 61.

[522] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 22.

BCI deleted, as indicated **[***]**

4.327 The European Communities asks the Panel to ignore U.S. arguments that non-subsidy factors are responsible for certain Airbus harm identified by the United States as irrelevant. For the European Communities, such negative financial factors would certainly be relevant for a panel to assess as non-attribution factors were it reviewing a claim of material injury under Article 5(a) of the SCM Agreement. But no such claim is before this Panel.[523]

4.328 The European Communities submits that it rebuts during the confidential session of the second meeting with the Panel unfounded U.S. arguments regarding the sales campaign specific evidence, and shows how the U.S. subsidies cause adverse effects in particular sales campaigns by suppressing prices, and by causing lost sales and displaced and impeded market shares.[524]

(v) Technology effects of the U.S. subsidies

4.329 The European Communities argues that the U.S. subsidies cause adverse effects not only through price effects, but also through technology effects. That is, but for the U.S. R&D subsidies, it would have taken Boeing far longer, at substantially more risk and cost, to launch and deliver the technologically-innovative 787 LCA. The 787's subsidy-enabled characteristics – innovative technologies, early availability, and low price – result in suppressed prices for, lost sales of, and lost market share for competing Airbus LCA, as well as a threat thereof.[525]

4.330 The European Communities asserts that the wealth of evidence submitted by it demonstrates that decades of U.S. R&D subsidies have allowed, and continue to allow, Boeing to research, design, develop, produce, and sell a technologically innovative 787 LCA, utilising, for example, fifty per cent composite materials, years earlier than it could have on its own. Specifically, the knowledge, experience, and confidence Boeing engineers gained through decades of participation in NASA and DOD-supported R&D programmes have provided Boeing the ability to identify the optimized solution for the design of the 787, at the optimal time.[526]

4.331 The European Communities dismisses the U.S. argument equating the precise dollar value of the U.S. R&D subsidies with the technological benefits Boeing derived from its participation in U.S. government-funded R&D programmes. The European Communities demonstrates that the knowledge, experience and confidence Boeing engineers derived from their participation in those programmes far exceeds the simple dollar value of those R&D contracts.[527] The European Communities argues that in addition to certain R&D subsidies conferring a financial benefit on Boeing, there is a related, and indeed additional, "multiplier" technological benefit, consisting of LCA R&D-related knowledge, experience and confidence. This "multiplier" technological benefit stems from the subsidy-enabled collaboration between Boeing and NASA/DOD engineers, which provides benefits to Boeing because it enhances, through knowledge and technology transfer, the quality of the research undertaken by Boeing under U.S. government-supported R&D programmes. Such collaborative research tends to generate better results at a faster pace. It is the accumulated knowledge and hands-on experience Boeing engineers gained from engaging in collaborative R&D with NASA/DOD engineers that are critical in developing LCA. It is also because Boeing engineers enjoy access to NASA research and testing facilities, as well as reports and databases containing

[523] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 23.
[524] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 31.
[525] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 27.
[526] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 28.
[527] European Communities' second written submission, paras. 838-839.

research results on a variety of technological areas that are not commercially available. This access further improves the quality of the research undertaken.[528]

4.332 The European Communities notes that, in contrast with Boeing, Airbus did not have access to critical results of U.S. government-supported R&D, including knowledge, experience and confidence. Although some NASA research results might be publicly available, they are frequently published late (due to limited and exclusive access rights granted to Boeing), Boeing generally holds the patents to any useful technology, and, in any event, NASA publications do not contain critical results that Airbus engineers could use in their actual design of LCA. As a result, it will take Airbus three years longer to develop and deliver the A350XWB than it takes Boeing to develop and deliver the 787.[529]

4.333 The European Communities notes that the United States and Boeing admit that Boeing applied U.S. government-supported technologies on the 787. These admissions include: (i) a Boeing presentation acknowledging that Boeing applied, on the 787, technologies developed from NASA-funded R&D; (ii) an admission by the United States that Boeing's 787 would not exist in its current form absent NASA subsidies supporting Boeing's research into critical technologies; (iii) agreement with the European Communities' assessment that the results of NASA's R&D subsidies have a "multiplicative effect" (*see* discussion *supra*); (iv) an admission that Boeing built upon the knowledge, experience and confidence its engineers gained while participating in NASA's Advanced Composite Technology Fuselage Program ("ATCAS"), to design and develop the 787 composite fuselage; and (v) an admission that work Boeing did under ATCAS provided the company with a roadmap for further research.[530]

4.334 Finally, the European Communities rejects the U.S. argument that Airbus' launch of the A380 in 2000, rather than the technology effects of the U.S. subsidies, is the cause of adverse effects, as erroneous. The European Communities submits that Airbus' decision to focus on the A380 in 2000 made business sense, and it was not until 2004, when Boeing launched the 787 with NASA and DOD support, that Airbus had to react in the 200-300 seat LCA market.[531]

(vi) Relationship between price and technology effects of the U.S. subsidies

4.335 The European Communities explains that each dollar's worth of U.S. R&D subsidy can confer one of two sets of benefits on Boeing.[532] On the one hand, a given amount of R&D subsidy can confer on Boeing a benefit that is directly financial in nature and which consists of the market value of the R&D undertaken (less any financial resources Boeing contributed to the R&D). That is, it consists of the value of the R&D, for which Boeing did not have to expend its own financial resources. This same amount of R&D subsidy, in addition, confers a benefit that is technological in nature, consisting of the additional knowledge, experience and confidence that Boeing engineers gained by undertaking the R&D in cooperation with NASA and DOD engineers, rather than on their own – i.e. the "multiplier" technological benefit. [533]

4.336 On the other hand, a given amount of R&D subsidy can confer on Boeing solely technological benefits from R&D that Boeing would not have undertaken itself. In that case, the

[528] European Communities' response to question 373(b), paras. 286-287.
[529] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 29.
[530] European Communities' comments on United States' response to question 371, paras. 288-290.
[531] Executive Summary of the European Communities' non-confidential oral statement at the second meeting with the Panel, para. 30.
[532] European Communities' response to question 373(b), para. 280.
[533] European Communities' response to question 373(b), para. 281.

entirety of the knowledge, experience and confidence gained by Boeing engineers would constitute the technology benefit. [534]

(e) Arguments relating to the three LCA markets

4.337 The European Communities recall that, according to the United States, three subsidized Boeing LCA families compete directly with three corresponding "like" Airbus LCA families. Thus, the European Communities considers that for purposes of evaluating the European Communities' serious prejudice claims, the United States concurs that competition between Boeing and Airbus takes place in three of the five LCA product markets: Boeing's 737NG family competes with Airbus' A320 family; Boeing's 787 family competes with Airbus' A330 family, Original A350 family, and A350XWB-800; and Boeing's 777 family competes with Airbus' A340 family and A350XWB-900 and -1000. Airbus and Boeing do not offer competing products in either of the last two LCA product markets: the Boeing 747 family covers the 400-500 seat wide-body LCA market; and the Airbus A380 covers the 500+ seat wide-body LCA market.[535] The European Communities confirms that it does not challenge any present price effects from U.S. subsidies that historically benefited the 717, 757 and 767, because those LCA are either not produced or no longer actively marketed by Boeing.[536]

4.338 Turning to its arguments and evidence of adverse effects in the three competitive LCA markets, the European Communities alleges that the U.S. subsidies for the 787 cause significant lost sales and price suppression in the world market and displacement and impedance in the U.S. and third country markets. It alleges that the U.S. subsidies for the 737 also cause significant lost sales and significant price suppression in the world market, and displacement and impedance in third country markets. Further, the European Communities alleges that the United States' subsidies for the 777 cause significant lost sales and price suppression in the world market, and displacement and impedance in third country markets.

4.339 The European Communities next claims that it rebuts the U.S. arguments regarding the 787. The European Communities argues that the evidence shows that Airbus suffered from the subsidy-enabled launch by Boeing of technologically innovative products. Specifically, it submits that the U.S. subsidies enabled Boeing to launch the 787 (i) at the time, (ii) with the technological capabilities, and (iii) at the price that it did. Indeed, contrary to the U.S. assertions, Boeing's 787 Dreamliner is the product of many years of Boeing's participation in U.S. government-supported R&D programmes that provided Boeing engineers with the necessary knowledge, experience and confidence in innovative technologies to launch the 787 at the time it did and at an acceptable level of risk.[537]

4.340 The European Communities further submits that without access to results of the same NASA- and DOD-supported research, Airbus' Original A350 could not match the subsidy-fuelled technological advances found on the 787. Consequently, Airbus suffered lost sales from the early launch of this aircraft, perceived by the market as "revolutionary". Without access to results similar to NASA- and DOD-supported research, it will take Airbus five more years to bring to market a truly competitive product, the A350XWB, and it will involve much higher cost. The European Communities argues that the negative effects of the 787 launch on Airbus' market share and pricing will reverberate well into the future.[538]

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[534] European Communities' response to question 373(b), para. 282.

[535] European Communities' first written submission, para. 1161.

[536] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 16.

[537] Executive Summary of the European Communities' second written submission, para. 62, Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 24.

[538] Executive Summary of the European Communities' second written submission, para. 63.

4.341 Noting that the United States raises a number of additional arguments, the European Communities observes that it rebuts all of them. First, the European Communities explains how the United States errs when stating that Boeing's internal funds and access to capital markets was more than sufficient to develop the innovative technologies for its 787. The U.S. argument fails to account for the non-cash related benefits for Boeing that are derived from U.S. government-supported R&D programmes, such as risk-free and cost-free funding, access to NASA engineers and facilities, as well as achievement of a vast amount of knowledge, experience and confidence in the application of innovative technologies.[539]

4.342 Moreover, the European Communities submits that the price effects of the U.S. subsidies increase Boeing's ability to lower its prices for the 787, causing further competitive harm to Airbus. Finally, the European Communities submits that while many of the non-attribution factors identified by the United States are relevant as background to understanding the general conditions of competition prevailing in the LCA industry, they do not undermine the European Communities' showing of a causal link between U.S. subsidies and serious prejudice. In particular, the United States argues that Airbus was forced to launch a "paper airplane", the Original A350, to compete with the 787, because its resources were concentrated on the A380. Contrary to the U.S. assertion, the European Communities contends that the initial launch of the Original A350 – which could not adequately compete with the subsidised 787 – and the later launch (and much later entry into service) of the A350XWB as a truly competitive aircraft were and are the result of Airbus' lack of access to key technologies supported by the U.S. subsidies. They were not due to Airbus' focus on the development and entry into service of the A380.[540]

4.343 The European Communities submits that it also rebuts the U.S. arguments that the European Communities' sales campaign evidence does not support the European Communities' adverse effects claim. The evidence provided by the European Communities regarding specific sales campaigns shows how Boeing uses its subsidies to offer lower prices that result in Airbus either losing significant sales, or having to accept significantly lower prices in instances where it wins a sale. With respect to the 787-related sales campaigns, the European Communities submits that evidence also shows how the subsidy-enabled technologies gave Boeing a competitive advantage in many sales campaigns, similarly causing significant lost sales and significant price suppression.[541]

4.344 The European Communities explains that, in its submissions, the United States admits that the 787 technologies allowed Boeing to win sales campaigns.[542] The European Communities notes that the United States even admits that, in at least half the challenged sales campaigns, the 787's subsidy-enhanced characteristics – early availability and innovative technology – were decisive in the customer's decision to purchase the 787 over the competing Airbus product.[543] As the European Communities submits it has demonstrated, the 787's innovative technology was enabled by the U.S. subsidies. Without this support, it will take Airbus five years longer – until 2013 – and require substantially more resources, to bring to market a true competitor to the 787 – the A350XWB-800. And without this support, Airbus lost not only market share because of competition against Boeing's subsidy-fuelled 787, it also had to compete against the low price expectations created by Boeing in the market for 200-300 seat LCA.[544]

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[539] Executive Summary of the European Communities' second written submission, para. 64.
[540] Executive Summary of the European Communities' second written submission, para. 65.
[541] Executive Summary of the European Communities' second written submission, para. 66.
[542] Executive Summary of the European Communities' second written submission, para. 67.
[543] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 24.
[544] Executive Summary of the European Communities' second written submission, para. 67.

BCI deleted, as indicated **[***]**

4.345 Turning to the 100-200 seat single-aisle LCA market, the European Communities notes that the United States is inconsistent in its argumentation. While alleging that any and all price reduction expectations and requests by LCA customers are due to Airbus' alleged systematic price undercutting strategy, the United States asserts that none of Boeing's subsidy-fuelled 2004-2006 price concessions for its 737NG had an impact on any of the A320 family sales campaigns at issue. Yet, at the same time, the European Communities points out that the United States acknowledges that Boeing competed vigorously with its 737NG against Airbus' A320 in every one of the sales campaigns.[545] In addition, the European Communities also observes that the United States takes an overly simplistic and incorrect approach to the concept of "fleet commonality", asserting that any airline that has ever ordered any Boeing aircraft can only be persuaded to switch to Airbus through Airbus price undercutting. As the European Communities submits it has explained, Airbus did not systematically undercut Boeing's prices to obtain additional sales. Boeing lost market share due to a number of reasons not attributable to an alleged Airbus price-undercutting strategy. To the contrary, it is Airbus that suffered from Boeing's pricing pressure, which was particularly severe after 2004.[546] In sum, the European Communities concludes that in the single-aisle LCA market, the provision of the U.S. subsidies to Boeing causes adverse effects to European Communities' LCA-related interests in the form of significant price suppression, significant lost sales, and impedance and displacement of market share.[547]

4.346 The European Communities submits that Boeing's change in its pricing policy in 2004 resulted in much lower prices in the market for single-aisle LCA. At a time of record demand for single-aisle LCA in 2004-2006, the $2.6 billion in U.S. subsidies benefiting the 737 facilitated Boeing's change in pricing policy that allowed it to seize significant sales from the Airbus A320 family. The European Communities therefore reasons that Boeing's only competitor, Airbus, had no other alternative but to follow suit and lower its single-aisle pricing in response. Yet, the European Communities observes that despite attempting to compete on price, Airbus still lost a significant number of sales, and market share. Moreover, even when Airbus secured sales, Boeing's subsidized pricing significantly suppressed A320 LCA prices.[548]

4.347 Further, the European Communities claims that the United States' subsidies for the 777 cause significant lost sales and price suppression in the world market, and displacement and impedance in third country markets. It further argues that, as in the single-aisle LCA market, Boeing substantially changed its pricing policy in 2004 with regards to its 777 family LCA. The result was dramatic. Subsidized additional cash-flow of $1.2 billion for the 777 available to Boeing in the 2004-2006 period caused Airbus to lose a significant number of A340 sales. And where Airbus was able to secure A340 orders, it could do so only at significantly suppressed prices. Despite the alleged inferiority of the A340 compared to the 777, the European Communities has only challenged sales campaigns where customers seriously considered the A340 and where the ultimate net price – and Boeing's subsidized final price – made the difference in Airbus losing the sale.[549]

4.348 With respect to the 300-400 seat LCA market, the European Communities states that in the sales campaigns at issue, the airlines considered the 777 and the A340 to be comparable. It argues that in every one of the challenged lost sales, a final subsidy-enabled Boeing discount made the difference between Airbus winning and losing the sale. As BCA's then-president, Alan Mulally, noted, reducing costs was "absolutely vital to our success in making our products more competitive

[545] Executive Summary of the European Communities' second written submission, para. 68.
[546] Executive Summary of the European Communities' second written submission, para. 69.
[547] Executive Summary of the European Communities' second written submission, para. 70.
[548] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 25.
[549] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 26.

and winning new orders". This statement, confirms that, contrary to the U.S. assertion that "it should be clear that any {subsidy} would have no effect on prices for the 777", Boeing uses cost reductions, whether from subsidies or other sources, to enable it to offer low prices and to win sales from Airbus. The European Communities argues that even in the rare instances where Airbus did manage to secure a small number of A340 sales, due to the effects of the U.S. subsidies, it did so only at significantly suppressed prices.[550] Finally, as in the single-aisle LCA market, the European Communities argues that Boeing substantially changed its pricing policy in 2004 with regards to its 777 family LCA. The result was dramatic. Subsidized additional cash-flow of $1.2 billion for the 777 available to Boeing in the 2004-2006 period caused Airbus to lose a significant number of A340 sales. And where Airbus was able to secure A340 orders, it could do so only at significantly suppressed prices. Despite the alleged inferiority of the A340 compared to the 777, the European Communities has only challenged sales campaigns where customers seriously considered the A340 and where the ultimate net price – and Boeing's subsidized final price – made the difference in Airbus losing the sale.[551]

(f) Conclusion

4.349 In sum, the European Communities submits that the amount and magnitude of the U.S. subsidies alone demonstrates that these subsidies, provided over an almost 20-year period, cause present adverse effects. But for the U.S. subsidies, Boeing could not exist as a commercially viable company charging the prices it does and developing the products it offers. This conclusion, according to the European Communities, flows from: (i) an assessment of the annual or per-aircraft magnitudes of those subsidies; (ii) a comparison with BCA's net earnings with and without the subsidies; and (iii) an assessment of the impact of those subsidies on Boeing's financial health.[552] Absent the U.S. subsidies, Boeing's commercial pricing and investment behaviour would be very different today, and would have been very different in the past. The European Communities states that this conclusion is further supported by an examination of the nature of the subsidies at issue. Boeing's ability and propensity to supply at a given price is heavily influenced by the availability of U.S. subsidies, which reduce its costs, or increase its revenue. As a duopolist, Boeing has a significant impact on prices, as the United States acknowledges with its repeated references to Boeing's change in its pricing policy in 2004. The European Communities concludes that an examination of specific aircraft markets and sales campaign evidence reinforce the findings of significant price suppression, significant lost sales and impedance and displacement of market share in particular country markets from the U.S. subsidies.[553]

2. Arguments of the United States

(a) Introduction

4.350 The United States contends that the arguments that alleged U.S. subsidies caused adverse effects to European Communities' interests ignore a critical fact – that Airbus and its aircraft are doing quite well. Airbus has gained 20 percentage points in market share since 2000. It tells the industry that its performance in 2006 was the "best" and "highest" in critical respects, and that 2007 is even better. The United States agrees that Airbus has experienced some problems, among them difficulties with its A380 and A350, but even Airbus admits that these have nothing to do with the alleged subsidies. The United States contends that the situation continues to improve. The A380, the largest civil aircraft ever, is scheduled to enter commercial service soon. In December 2006, Airbus unveiled the final design of its A350, labelled the A350 XWB, with innovative technologies that it promises

[550] Executive Summary of the European Communities' second written submission, para. 71.
[551] Executive Summary of the European Communities' non-confidential oral statement at the first meeting with the Panel, para. 26.
[552] Executive Summary of the European Communities' second written submission, para. 72.
[553] Executive Summary of the European Communities' second written submission, para. 73.

will give customers unprecedented cost savings.[554] The United States points out that, in spite of this impressive performance by Airbus, the European Communities alleges that subsidies caused serious prejudice to Airbus in the form of price suppression, lost sales, and market displacement/impedance.[555]

(b) Arguments relating to the European Communities' serious prejudice claim

4.351 As a general matter, the United States first notes that the years 1995-2005 were a period of steady triumph for Airbus. It became the largest producer of civil aircraft in the world, increasing its share of deliveries from 33 per cent to 57 per cent, and its share of orders from 16 per cent to 50 per cent. It successfully converted from a consortium to an integrated company, with a profit margin of more than ten per cent. And, it developed a revolutionary new aircraft, the A380, designed to carry more people farther than any civil aircraft before it. In May of 2006, Airbus's parent company, EADS, reported at its general meeting that:

> "Revenues increased by 10% to 22,179 million (FY 2004: _20,224 million). Airbus' EBIT margin improved from 9.5% to 10.4%. With 1,111 gross orders in 2005, Airbus achieved an all-time record order intake and as a result outsold its competitor for the fifth year in a row. … At the end of 2005, the Airbus order book amounted to 202 billion based on list prices. This is an increase of 48% over year-end 2004. The order book represents a total 2,177 commercial aircraft (2004: 1,500)."[556]

The Airbus management also reported that the company had almost finished testing of the A380, that it expected to deliver the first A380 to Singapore Airlines "at the end of 2006",[557] and that another new aircraft launched that year, the A350, had secured 172 orders by the end of 2005.[558]

4.352 The United States further asserts that only a month later, the situation took an unfavorable turn. By then, production problems that would lead to a significant delay in the delivery of the first A380 and cost Airbus billions of euros in penalty charges and added costs, had come to light. As a result, the value of EADS shares dropped 25 per cent in one day. Airbus also had to face the consequences of its decision to focus its engineering and other resources on the A380. That decision meant that Airbus's effort to bring to market its A330 replacement and 787 competitor, the A350, fell far short of customer expectations. The co-CEO of EADS resigned amidst suspicions of insider trading, and two successive Airbus CEOs resigned before year end, largely as a result of the A380 delays and their effects.[559] The United States cites the EADS's report to shareholders in May 2007 recognized that 2006 had been "a disappointing year" for Airbus.[560] It explained the difficulties as:

(1) Problems with the A380. "{P}roduction difficulties encountered for the A380 led to delays in its projected delivery schedule, with first A380 currently scheduled for

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[554] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 16.

[555] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 17.

[556] Executive Summary of the United States' first written submission, footnote 16. EADS, Documentation for the Annual General Meeting ("EADS 2005 Documentation"), 4 May 2006, Exhibit US-266, p. 6.

[557] Executive Summary of the United States' first written submission, footnote 17. EADS 2005 Documentation, Exhibit US-266, p. 20.

[558] Executive Summary of the United States' first written submission, para. 55.

[559] Executive Summary of the United States' first written submission, para. 56.

[560] Executive Summary of the United States' first written submission, footnote 18. EADS, Documentation for the Annual General Meeting ("EADS 2006 Documentation"), 4 May 2007, Exhibit US-267, p. 7.

delivery in October 2007. The resulting costs and charges associated with these delays will impose a significant burden on EADS' future financial program".[561]

(2) Problems with the A350. "A350 related charges, 0.5 billion in increased R&D . . . are other important contributors to the loss".[562]

(3) Appreciation of the Euro against the Dollar. "{L}ess attractive dollar hedges are other important contributors to the loss".[563]

Airbus predicted more losses in 2007, based largely on the same three factors: "further costs to support the A380 program, potential A350XWB launch charges, higher R&D expenses, as well as the impact of the worsening U.S. Dollar parity to the Euro".[564] Significantly, there was no mention of competition from Boeing or the effects of subsidies to Boeing as a source of Airbus's problems.[565]

4.353 The United States alleges that these were not the only reasons that Airbus was having trouble. Two other important factors played a role during this period, although EADS pays them little attention:

(4) Problems with the A340. When Airbus launched the A340 for long-haul service in the late 1980s, it placed four engines on the aircraft, and has retained that configuration in all subsequent models. As prices for aviation fuel increased in the 2000s, that made the A340 much less popular than the 777, which was more fuel efficient because it carried only two engines.

(5) Problems with pricing. In 2002, Airbus had launched a price war, dropping its prices for A320s low enough that low-cost carriers would switch from the 737, which they had previously favored. The effect was to lower prices for all single-aisle aircraft. Boeing reluctantly lowered prices on the 737 only after belatedly realizing that matching Airbus was necessary to prevent further market share losses.[566]

4.354 According to the United States, even with these varied difficulties, EADS could still point to a number of Airbus successes in 2006:

> "The Airbus division delivered a record number of aircraft in 2006 (434 versus 378 in 2005). This led to revenues of 25,190 million representing a 14% increase compared to the previous year (FY 2005: 22,179 million). ... With 824 gross orders (790 net orders), Airbus achieved its second best year in terms of sales, including 673 Single Aisles, 134 A330s, A340s and A350s as well as 17 A380s.[567]

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[561] Executive Summary of the United States' first written submission, footnote 19. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 7.

[562] Executive Summary of the United States' first written submission, footnote 20. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 7.

[563] Executive Summary of the United States' first written submission, footnote 21. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 24.

[564] Executive Summary of the United States' first written submission, footnote 22. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 29.

[565] Executive Summary of the United States' first written submission, para. 57.

[566] Executive Summary of the United States' first written submission, para. 58.

[567] Executive Summary of the United States' first written submission, footnote 23. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 24.

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> As a result of this strong sales performance, Airbus has increased its record backlog by 17% to 2,533 aircraft at the end of 2006, giving Airbus 51% of all outstanding orders.[568]
>
> And, at the Paris Air Show, Airbus CEO Louis Gallois announced that "{t}his air show confirmed that Airbus is very much back in the market". The statistics confirm his assessment:
>
> - "Airbus announced a record 425 aircraft orders worth $61.7 billion for the week, triple the sales it announced during the 2006 trade event".
>
> - "Airbus's orders, combined with 303 commitments to purchase planes it announced during the week, equaled the number of aircraft that typically roll off its assembly lines during a two year stretch".
>
> - "Airbus appeared to shore up market confidence in its A350 WXB, the aircraft designed, and redesigned, to counter Boeing's hot selling 787 Dreamliner. The 141 firm orders announced by the European plane marker during the trade event included a $3.7 billion order from Singapore Airlines, one of the industry's blue chip players, announced Friday"."[569]

4.355 The United States thus asserts that Airbus's record-setting performances in terms of its large civil aircraft production, sales, revenues, market share gains and profits between 2000-2005, and its evidently quick recovery from the A380 and A350 problems that made 2006 a "disappointing" year indicate that any downturn was temporary. It does not constitute serious prejudice, and, therefore, does not qualify for a remedy under Article 7.[570]

4.356 The United States argues, however, that even if the Panel were to agree that Airbus's setbacks with the A380, the A350, the A340, or any other of its aircraft rose to the level of serious prejudice, a subsidy is actionable under Article 6.3 only if that prejudicial condition is "the effect of the subsidy". The United States submits that the European Communities has failed entirely to clear this hurdle. The European Communities concedes that standard requires a "but for" causation test. To succeed, the complaining party must show that but for the subsidization, the serious prejudice would not have occurred. The European Communities also recognizes that this test requires a counterfactual analysis of how Airbus and Boeing would have performed in the absence of the alleged subsidization.[571] It must, in other words, present evidence to show that "but for" these alleged subsidies, Boeing's development or pricing of large civil aircraft would have been materially different in a manner that one of the serious prejudice factors resulted.[572]

4.357 In the view of the United States, the European Communities' chain of reasoning proceeds as follows: (i) early stage research programmes, and military research and development programmes, under which Boeing performs work for the U.S. Government that is not linked to the development, production and sale of any particular commercial aircraft, have subsidized BCA's operations; (ii) the

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[568] Executive Summary of the United States' first written submission, footnote 24. EADS 2006 Documentation, 4 May 2007, Exhibit US-267, p. 7. Executive Summary of the United States' first written submission, para. 59.

[569] Executive Summary of the United States' first written submission, footnote 25. Johnsson, Airbus finds its lost love in Paris, *Chicago Tribune*, 23 June 2007, Exhibit US-268. Executive Summary of the United States' first written submission, para. 60.

[570] Executive Summary of the United States' first written submission, para. 61.

[571] Executive Summary of the United States' first written submission, footnote 26. European Communities' first written submission, para. 1062.

[572] Executive Summary of the United States' first written submission, para. 62.

alleged benefit of those programmes vastly exceeds the amount actually paid to Boeing under the government's contracts with Boeing; (iii) Boeing would not have been ready to launch the 787 when it did without the "knowledge, experience, and confidence" Boeing gained while performing research services under those contracts;[573] and (iv) an economic model created by Professor Luis Cabral indicates that subsidies that increase "non-operating cash flow" lead to "price effects" in the form of "aggressive pricing", especially on competitive sales of the A330, A350 Original, A320, and A340.[574] Thus, the United States submits that the European Communities' serious prejudice case against the Boeing 737 and 777 is based entirely on the alleged price effects of the alleged subsidies, and the serious prejudice case against the 787 is based on a combination of the alleged price effects of the alleged subsidies and the product development advantages the European Communities claims that Boeing gained from the alleged subsidies. However, it presents no credible evidence in support of either theory.[575]

4.358 The United States argues that at a fundamental level, the European Communities' serious prejudice arguments fail to explain how Boeing could have lost 14 percentage points of market share during the 2000-2006 period if the programmes challenged by the European Communities were conferring the advantages that the European Communities claims they were. If the European Communities is correct that Boeing's large civil aircraft operations have been "massively subsidized" since 1989 to the detriment of Airbus, one would expect these allegations to be corroborated by clear long-term market trends.[576] In fact, the long term trends contradict the European Communities' allegations. The most striking developments among large civil aircraft producers over the past 25 years have been the rise of Airbus from a peripheral player in the market to its largest supplier (displacing Boeing) and the exit of two American producers from the market. [577] The United States notes that recently Airbus placed its "largest ever order in terms of value" – 70 A350XWBs and 11 A380s ordered by Emirates Airlines. Airbus projects that it will deliver more aircraft than Boeing for the fifth straight year and break its 2005 record for aircraft orders.[578] Therefore, the United States submits that to the extent that the European Communities asserts that Airbus' competitive performance could have been even better during the relevant period, the United States has submitted evidence showing that the alleged subsidies are not the cause, in general, or with regard to the particular aircraft orders that the European Communities alleges as evidence of serious prejudice. The United States adds that the European Communities has failed to respond to the substance of this argument in any way.[579]

(i) Arguments relating to the European Communities' causation analysis under Article 6.3

4.359 The United States argues that the European Communities has failed to establish the existence of any of the Article 6.3 conditions. With regard to displacement/impedance under Article 6.3(a) and (b), the European Communities has framed its analysis in terms of orders, which do not indicate the "imports" or "exports" covered by those Articles. Moreover, the countries the European Communities identifies as "third country markets" had only small and sporadic deliveries, such that they do not allow for any meaningful conclusions under Article 6.3(b). As for price suppression, the United States contends that outside factors like Airbus' missteps in launching the A350, the unattractiveness of the A340 in a high fuel cost environment, and Airbus undercutting of Boeing prices in major A320 campaigns leave no reason to expect Airbus' prices to have increased more than

[573] Executive Summary of the United States' first written submission, footnote 27. European Communities' first written submission, para. 1334.
[574] Executive Summary of the United States' first written submission, para. 63.
[575] Executive Summary of the United States' first written submission, para. 64.
[576] United States' comments on the European Communities' response to question 370, para. 203.
[577] United States' comments on the European Communities' response to question 370, para. 204.
[578] Executive Summary of the United States' second written submission, para. 54.
[579] Executive Summary of the United States' second written submission, para. 55.

they actually did. With regard to lost sales, the evidence demonstrates that factors other than the alleged subsidies explain Boeing's success in the sales campaigns identified by the European Communities.[580]

4.360 The United States submits that the European Communities misstates the proper standard for causation, asserting that "the complaining Member needs to show only that prices, sales, and market share would be higher, but for the subsidies". The United States argues that that is not the standard. It asserts that, in fact, the causation inquiry is whether "but for the subsidies", serious prejudice would have occurred. That is not any change in prices, sales, or market share, but rather significant lost sales, significant price suppression, and displacement/impedance that rises to the level of serious prejudice.[581] On this basis, the United States argues that the European Communities also fails when it comes to the requirement of establishing a causal link between the existence of the Article 6.3 conditions that it asserts and the alleged subsidies. It makes three basic arguments in this regard, but all of them are invalid.[582]

4.361 First, the European Communities claims that the magnitude of the alleged subsidies is so great that they must have caused serious prejudice. However, as the United States has discussed, the European Communities' calculations grossly exaggerate the value of the alleged financial contributions and any benefit they could conceivably have conveyed to Boeing.[583]

4.362 Second, the European Communities claims that the nature of the alleged subsidies caused Boeing to lower its large civil aircraft prices below what they otherwise would have been and gave Boeing a technology advantage in developing the 787 that it would not otherwise have had. It argues that these effects in turn caused price suppression, lost sales, and displacement or impedance. However, the European Communities has misunderstood the nature of the programmes it attacks – they do not increase non-operating cash flow. This error by itself should end the analysis. But the European Communities then makes another error – asserting that increases in non-operating cash flow would lead a company like Boeing to change its pricing practices. It is the market, and not changes in cash flow, that determines Boeing's prices.[584]

4.363 The only support the European Communities offers for concluding that cash flow affects Boeing's prices is a series of propositions set out in the Cabral Report, but these are deeply and fundamentally flawed.[585]

- The Cabral Report depends on the European Communities' greatly exaggerated calculation of the amount of the alleged subsidies.[586]

- In explaining how alleged subsidy payments affect Boeing, the European Communities assumes that Boeing spends any additional cash flow in only two ways – making payments to shareholders and using the cash to reduce its prices.

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[580] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 18.
[581] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 5.
[582] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 19.
[583] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 20.
[584] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 21.
[585] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 22.
[586] United States' response to question 370, para. 249.

The European Communities disregards readily available public data showing the variety of uses to which Boeing applies its free cash flow, and aggressive pricing is not one of them. In fact, Boeing can and does spend its money in a number of ways that have no effect on prices.

- The Cabral model further assumes that Boeing allocates free cash among investment options in fixed proportions, when the evidence establishes that the attractiveness of different investment options differs over time, and that Boeing changes investment allocations accordingly.[587]

- The European Communities assumes contrary to the evidence that a significant portion of Boeing's 2000-2006 sales involved significant switching cost and learning cost incentives to lower price.[588]

- The European Communities then assumes that Boeing has constrained access to capital, when in fact it has available sources of internal capital and faced no significant capital constraints during the relevant period.

4.364 The European Communities then assumes that its theoretical model accurately depicts how Boeing's pricing practices would be affected by additional cash flow from the alleged subsidies, while ignoring the actual evidence of Boeing's market behavior, which is the opposite of what the theoretical model would predict.[589]

4.365 The European Communities affirm that "the vast amount of the 'development' subsidies Professor Cabral assesses are untied funds".[590] This response is important to the Panel's assessment of the European Communities' causation theories because, as Professors Stiglitz and Greenwald state, the effects of subsidies on prices and competition are likely to be greatest where the subsidies in question either create supply or maintain supply that would not otherwise exist and/or reduce a producer's marginal costs of producing a particular product.[591] In their Statement on the Question of the Impact of Subsidies on Supply and Prices in the LCA Market (the "Stiglitz/Greenwald Statement"), Professors Joseph E. Stiglitz and Bruce C. Greenwald review "the different types of programs that governments have used to support their aerospace industries" with specific reference to (i) new product development or launch subsidies, (ii) general research and development subsidies not specifically related to particular products, and (iii) unrestricted cash subsidies.[592] They conclude that

> "there is a critical difference in terms of their impact on competition and, therefore, market pricing between, on the one hand, subsidies that create supply, maintain uneconomic supply or are tied to the production and sale of a particular aircraft model, and, on the other, those that do not or are not."[593]

4.366 Subsidies that are tied to the development, production, or sale of a particular product are likely to be supply-creating or supply-maintaining.[594] By contrast, subsidies that are not tied to the development, production, or sale of a particular product are far less likely to be supply creating or

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[587] United States' response to question 370, para. 249.
[588] United States' response to question 370, para. 249.
[589] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 23.
[590] United States' comments on the European Communities' response to question 374, para. 259.
[591] United States' comments on the European Communities' response to question 374, para. 260.
[592] United States' response to question 389, para. 282.
[593] United States' response to question 389, para. 282.
[594] United States' comments on the European Communities' response to question 374, para. 260.

supply maintaining.[595] The Appellate Body's decision in *US – Upland Cotton (Article 21.5 – Brazil)*, which placed great weight on whether subsidies are, in their nature, supply-creating or supply-maintaining, echoes the analysis of Professor Stiglitz and Greenwald.[596] Thus, an assessment of the European Communities' claim of serious prejudice through the effects of the alleged NASA and DOD subsidies would need to address the evidence that even if they were subsidies, they would have no material impact on Boeing's product development or pricing decisions both because they do not affect Boeing's marginal large civil aircraft production costs and because they are not tied to any other supply-creating or supply-maintaining activity.[597]

4.367 By its own admission, therefore, the bulk of the alleged subsidies about which the European Communities complains are, under the "broad contours" of the Stiglitz/Greenwald Statement endorsed by the European Communities, unlikely to affect competition or prices in the large civil aircraft market.[598] The European Communities attempts to place them into the supply creating/supply maintaining category by arguing that the amount and magnitudes of the alleged subsidies are so large that, "but for" them Boeing would not be a viable competitor.[599] After running through a series of causation theories, the central European Communities argument now is that, but for the alleged R&D subsidies, Boeing would not be a viable competitor in the large civil aircraft market.[600]

4.368 Significantly, the European Communities does not argue that, but for the subsidies, Boeing's large civil aircraft operations would have lost money over the period 1989-2006.[601] Instead, it claims that when the full amount of the alleged subsidies is deducted from the 1989-2006 profitability of Boeing's large civil aircraft operations, the returns, though positive, fall below the cost of capital invested in those operations.[602] In fact, leading experts' independent analyses of BCA show that even after deducting the full amount of the alleged subsidies from Boeing's revenues, the returns on its large civil aircraft operations were well above the cost of capital invested in the business.[603] As Professor David Wessels of the University of Pennsylvania's Wharton School concludes, "BCA would be economically viable (and even attractive) regardless of the provision of subsidies".[604]

4.369 However, the Panel should not even have to reach this question.[605] The pricing and product development decisions that shaped Boeing's participation in the large civil aircraft market between 2004 and 2006 were profit-maximizing and led to a sharp "bottom line" improvement in Boeing's business by 2006.[606] Therefore, the European Communities cannot (and does not) claim that those

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[595] United States' comments on the European Communities' response to question 374, para. 260.

[596] United States' response to question 391, para. 308 (citing Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil*), para. 392 ("Whether production of a particular product is higher than it would have been in the absence of the subsidy is often a critical issue in establishing whether the effect of the subsidy is significant price suppression. In our view, the effect of a subsidy on production can also be assessed on the basis of a long-term perspective that focuses on how the subsidy affects decisions of producers to enter or exit a given industry.")).

[597] United States' response to question 391, para. 308.

[598] United States' comments on the European Communities' response to question 374, para. 261.

[599] United States' comments on the European Communities' response to question 374, para. 261.

[600] United States' response to question 389, para. 290 (citing European Communities' response to question 292, paras. 647-651).

[601] United States' comments on the European Communities' response to question 370, para. 218.

[602] United States' comments on the European Communities' response to question 370, para. 218.

[603] United States' comments on the European Communities' response to question 370, para. 218.

[604] United States' comments on the European Communities' response to question 379, para. 322.

[605] United States' comments on the European Communities' response to question 370, para. 222.

[606] United States' comments on the European Communities' response to question 370, para. 222.

decisions did not make good economic sense.[607] Given the undisputed fact that Boeing's large civil aircraft operations were profitable, both with and without the alleged value of the subsidies, the only real question is how the European Communities can contest Boeing's ability to make profit-maximizing product development and pricing decisions between 2004 and 2006.[608]

4.370 The European Communities also asserts that the "nature" of the subsidies gives rise to "technology effects" on the 787. The European Communities has provided no basis to conclude that in the absence of the alleged subsidies, Boeing would have developed the 787 later than it did or differently than it did. In fact, the NASA research at issue was widely available, the composites technologies that Boeing built upon to develop the 787 were available in the commercial marketplace, and Airbus was a leader in composites technology at the time it chose to pursue the A380.[609]

4.371 The European Communities cannot point to any evidence that any of the R&D programmes that it claims benefitted the 787 were 787-specific or contingent in any way on Boeing's decision to bring the 787 to market.[610] Instead, the European Communities argues that general research on technologies provided "learning" that Boeing drew upon in its own applied research for the 787. Boeing has explained that it did no such thing.[611] More importantly, as a theoretical matter, foundational research such as NASA conducts does not create particular technologies or products because it is too far removed from the development stage.[612] Professors Stiglitz and Greenwald do not consider these types of programmes to be "supply creating or maintaining" and, therefore, fall into the category of programmes that are unlikely to affect competition in the large civil aircraft market.[613]

4.372 Third, the European Communities purports to have calculated with precision how the alleged subsidies collectively reduced the prices charged by Boeing on particular transactions. These calculations are, however, the product of Professor Cabral's economic model, which accepts as given the European Communities' exaggerated calculation of the magnitude of alleged subsidies and the erroneous propositions noted above. Professor Cabral's reliance on invalid data and an invalid methodology necessarily lead to invalid results.[614]

4.373 At the same time, the European Communities ignores the "other factors" that are responsible for the problems Airbus has encountered in the market in the past year or two. By devoting its engineering and other resources to the A380, Airbus precluded itself from devoting those resources to development of a smaller fuel-efficient competitor to Boeing's 787, which proved to be more popular than Airbus ever imagined. And, its choice of a relatively fuel-inefficient design for the A340 created the problems Airbus now faces in marketing that aircraft in today's high fuel price environment. And finally, by systematically undercutting Boeing's prices, Airbus has set pricing expectations in the marketplace at a level that is lower than would otherwise have been the case. These choices are the

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[607] United States' comments on the European Communities' response to question 370, para. 222 (noting in a footnote that, to the contrary, the European Communities concedes the point, and citing European Communities' response to question 378, paras. 411-413).

[608] United States' comments on the European Communities' response to question 370, para. 222.

[609] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 24.

[610] United States' comments on the European Communities' response to question 380, para. 328.

[611] United States' comments on the European Communities' response to question 380, para. 328 (citing Bair Affidavit, paras. 38-42).

[612] United States' comments on the European Communities' response to question 380, para. 328.

[613] United States' comments on the European Communities' response to question 380, para. 328 (citing Statement by Stiglitz and Greenwald, Exhibit US-1309, p. 3).

[614] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 25.

true source of any difficulties Airbus now faces, and they have nothing to do with the alleged subsidies.[615] The United States' submissions have discussed this issue at length. To summarize:

- The alleged suppression of prices for the A330 and A350, the sales lost by these aircraft to Boeing's 787, and any loss in market share (whether measured by deliveries or orders), are the direct consequence of Airbus' decision to focus on the A380 while Boeing chose to focus on developing a smaller aircraft. Because of its product development choices, Airbus had no aircraft that could compete effectively with the 787 and did not have the engineering and monetary resources to design one, until it unveiled the A350 XWB. Nor can there be any realistic claim of price suppression, because market prices for currently offered mid-sized aircraft were set by reference to existing pricing on mid-sized aircraft.

- Any suppression of prices for the A320 about which the European Communities complains is the result of, and is directly traceable to, a series of sales campaigns in which Airbus deliberately undercut Boeing's prices in order to capture key Boeing accounts.

- Because of its four-engine design, the A340 is fuel inefficient, a significant disadvantage in a time of very high fuel costs. Additional performance problems associated with this particular aircraft have added to the problem, forcing Airbus to lower the A340 prices to compensate, **[***]**. Thus, any suppression of A340 prices, lost sales, and any loss in market share (whether measured by deliveries or orders) is the result of Airbus' design decisions, which have nothing to do with alleged subsidies to Boeing.[616]

4.374 The European Communities essentially ignores the evidence of these non-attribution factors and their role in determining sales and prices for Airbus aircraft, arguing that they are relevant only to an analysis of the company's financial performance for purposes of assessing a claim of material injury, a claim that the European Communities has not made. However, as the *US – Upland Cotton* panel found:

> "the condition of a causal link requires us to ensure that the significant price suppression is "the effect of the subsidy" within the meaning of Article 6.3(c). This necessarily calls for an examination of United States subsidies, within the context of other possible causal factors, to ensure an appropriate attribution of causality."

The United States argues that the European Communities' failure to address these other causes for the alleged indicia of serious prejudice means that its causation argument fails, and along with it, the serious prejudice claims that rest upon that argument.[617]

4.375 In response to the European Communities' assertion that the Appellate Body in *US – Upland Cotton* endorsed the so-called "unitary" approach for assessing causation, the United States contends that the Appellate Body said only that the text of Article 6.3(c) does not "preclude" the approach taken by the panel – certainly not an endorsement of any particular analysis. The United States also notes

[615] Executive Summary of the United States' non-confidential oral statement at the first meeting with the Panel, para. 26.
[616] Executive Summary of the United States' second written submission, para. 56.
[617] Executive Summary of the United States' second written submission, para. 57.

that the Appellate Body went on to specify that in any event the panel should consider the same types of factors that it has identified for this Panel.[618]

4.376 Noting that the European Communities dismisses out of hand the possibility that anything other than the alleged subsidies could have caused Airbus' aircraft sales and prices to be at the level they were, while focusing instead on trying to build a case that the alleged subsidies are to blame, the United States contends that the European Communities' case rests on four pillars:

- First, that the U.S. Government has subsidized Boeing "to the tune of almost $24 billion".

- Second, that the magnitude of the alleged subsidies is, in and of itself, sufficient to prove the causal link between them and Boeing's reference period pricing.

- Third, that all these alleged subsidies, which include funds paid to enterprises other than Boeing and a portion of NASA's and DOD's funding of government employee salaries and administrative expenses, are the equivalent of "free cash" to Boeing, and that BCA, Boeing's commercial aircraft division, used this "free" cash to "price down" its 737, 777 and 787 aircraft in a way that it otherwise could not have done.

- Fourth, that the R&D work done for NASA and DOD gave Boeing the "knowledge, experience, and confidence" necessary for it to bring the 787 to market when it did.

The United States argues that the European Communities, as the complaining party, bears the burden of proof for each of these points. However, the United States points out that even on these topics, it is silent on critical issues. Where it is not silent, it relies on assertions that either have no supporting evidence or are contrary to the evidence before the Panel. Such assertions do not, in the United States' view, establish that the alleged subsidies caused serious prejudice and, therefore, do not make a prima facie case that the alleged subsidies caused serious prejudice.[619]

4.377 The United States argues that the evidence shows that Boeing actually received a tiny fraction of the $24 billion that the European Communities alleges. Instead, almost all of this amount took the form of (i) payments to enterprises other than Boeing that supplied research and development services to the government; (ii) government administrative expenses or the salaries of government employees; (iii) state tax reductions that Boeing will realize in relatively small amounts over the next 20 years; or (iv) FSC/ETI tax benefits that the United States has discontinued. The European Communities never provides a convincing reason as to why these payments would have any effect on Boeing's commercial aircraft operations, much less its aircraft product development or pricing.[620]

4.378 With regard to the payments that Boeing actually received, the United States argues that the European Communities has greatly overstated the amounts, relying on estimates provided by its consultants that contradict the very documents they are supposed to have "meticulously examined". The $24 billion figure also includes alleged subsidies that, under the European Communities' analysis, are attributable to the Boeing aircraft that the European Communities views as not competing with the A320, A330, A340, A350 Original, or A350XWB; namely the Boeing 717, 757, 767, 747, MD-11, MD-80, and MD-90. As the European Communities has conceded that such alleged subsidies have "no such present {adverse} effects in the LCA markets", it is difficult to understand why the European Communities persists in including them in its overall number. The European Communities

[618] Executive Summary of the United States' non-confidential closing statement at the first meeting with the Panel, para. 4.
[619] Executive Summary of the United States' second written submission, para. 58.
[620] Executive Summary of the United States' second written submission, para. 59.

has also disregarded the great weight of evidence proving that none of the payments to Boeing – with the exception of the relatively small amount of FSC benefits that the United States has already discontinued – was either a subsidy or specific.[621]

4.379 Thus, the United States contends that the European Communities' assertion that the alleged $24 billion in subsidies is large enough in and of itself to have caused serious prejudice, rests entirely on rhetoric. It argues that mere assertions are insufficient to meet the burden of proof. Indeed, the United States asserts that once account is taken of the $9.6 billion in NASA payments to Boeing alleged by the European Communities that never occurred, the billions more in DOD payments that had nothing to do with Boeing or its large civil aircraft, the $7.5 billion in alleged subsidies that the European Communities concedes are not causing serious prejudice, and the FSC/ETI benefits that have been discontinued, it becomes clear that any remaining payments, dispersed as they are over the 35-year period stretching from 1989 through 2024, are too small to be causing serious prejudice to the European Communities.[622]

4.380 In response to the European Communities' assertion that the alleged subsidies are the equivalent of "free" cash that allow Boeing to "price down" aircraft for competitive transactions, the United States argues that the European Communities' efforts come no closer to meeting its burden of proof because more than half of the alleged subsidies, by value, consists of payments by NASA and DOD for services provided to the U.S. Government on projects devised by the government to achieve government objectives. The evidence shows that these payments to Boeing were reimbursements for the cost of work performed for the U.S. Government and, thus, were not in any sense "additional nonoperating cash flow" to Boeing, much less "free" or "unencumbered" cash to Boeing's commercial aircraft division, BCA. The United States posits that even if one were to assume, *arguendo*, that the programmes challenged by the European Communities did confer subsidies, and that they did provide free nonoperating cash flow, the European Communities has provided no plausible reason to conclude that but for the alleged subsidies, Boeing would have priced its large civil aircraft any differently. The United States submits that throughout the relevant period, BCA had ample cash flow to finance its R&D, and Boeing had unconstrained access to capital markets. Therefore, according to the United States, Boeing did not need the alleged subsidies to fund its commercial operations.[623]

4.381 The final pillar, in the United States' view, of the European Communities' adverse effects case is the claim that NASA and DOD programmes enabled Boeing to launch the 787 sooner and more quickly than Airbus could launch its competing product, the A350XWB. However, the United States argues that the evidence disproves this theory. First, it submits that Boeing was able to bring the 787 to market sooner than Airbus was able to offer a competitive version of the A350 because it started earlier, based on its reading of customer demand. The alleged subsidies had nothing to do with its decision to move forward with the 787 when it did or its ability to execute its plans. Airbus started later because it thought the market demanded a much larger aircraft – the superjumbo A380 – and the company was so focused on that aircraft (and correcting production errors discovered late in the project) that it had insufficient resources to devote to another project. And as for how quickly Boeing developed the 787, when the development periods for the 787 and A350XWB are laid side by side, it is clear that the projected development time is almost the same. Second, the United States argues that the affidavit of Michael Bair, the general manager of Boeing's 787 programme, describes the many reasons that DOD and NASA technology gave Boeing no competitive advantage. In fact, the United States submits that there is no meaningful technology gap. The United States points to the fact that Airbus itself recently acknowledged what Airbus has been saying for the last decade: "{n}obody has more experience working with composites than Airbus. We know this stuff well". To the extent that Boeing may have moved ahead of Airbus in industrializing some technologies for the 787, the

[621] Executive Summary of the United States' second written submission, para. 60.
[622] Executive Summary of the United States' second written submission, para. 61.
[623] Executive Summary of the United States' second written submission, para. 62.

United States asserts that it is because of self-funded research. Airbus, on the other hand, has concentrated on other areas, and moved ahead of Boeing in those.[624]

4.382 The United States points out that the European Communities itself contends that Airbus engineers have found that NASA's published reports provide little in the way of information useful for production of large civil aircraft. The European Communities assumes that this is because the reports omit results or proprietary data funded by NASA. However, NASA does not fund the development of proprietary information, and Boeing is prohibited from treating NASA-funded results as proprietary. As for the utility of the data for developing or producing aircraft, NASA funds primarily foundational research, conducted in the laboratory, which has little applicability to the actual development or production process. The United States adds that the Airbus engineers' purported inability to derive production information from the NASA reports merely confirms the point the United States has been making all along – that NASA work does not translate from the laboratory to the factory, as the Bair affidavit documents.[625]

4.383 The United States asserts that these are the points that the United States and the European Communities both view as the "core" of the dispute. The United States finds it telling that at this stage, the European Communities has yet to put forward credible arguments in support of any one of these critical points, let alone all of them. In fact, as the United States has shown, the European Communities has failed to meet its burden of proof to establish that the alleged subsidies are "free cash" or grants to Boeing, that the amount of the alleged subsidies is $24 billion, or that but for the alleged subsidies, Boeing's pricing would have been different or its development of the 787 delayed to the point that serious prejudice did not occur. Therefore, the United States submits that the European Communities has failed to establish that the alleged subsidies caused serious prejudice to European Communities' interests.[626]

(ii) Amount and magnitude of the alleged subsidies

4.384 The United States further argues that the evidence shows that most of the $24 billion that the European Communities alleges as subsidies to Boeing was either never paid to Boeing, or is funding that the European Communities concedes is not causing serious prejudice. In particular, the United States asserts that in its first written submission it demonstrated that the European Communities greatly overestimated the amount paid under the programmes it challenges, and that the very documents on which the European Communities' consultants relied confirm the error of their estimates. Thus, the $24 billion figure that the European Communities references so frequently as the amount of the alleged subsidies received by Boeing includes $9.6 billion that NASA paid to enterprises and individuals with no relation to Boeing. The United States requests the Panel to discount that figure accordingly. This is not the only amount improperly included in the $24 billion figure. The European Communities in its oral statement stated "{w}e do not challenge any present adverse effects from U.S. subsidies that historically benefited the 717, 757, and 767 because there are no such present effects in the LCA markets". This, according to the United States, is a significant point. The European Communities, as part of its causation argument, attributes the alleged subsidies to particular aircraft models. Under this methodology, $7.5 billion of the subsidies that the European Communities alleges during the 1989-2006 period is attributable to the 717, 747, 757, 767, MD-11, MD-80, and MD-90 – all aircraft that the European Communities said in its oral statement were not causing adverse effects to European Communities' interests. (In fact, by defining the subsidized like products as being the 737, 777, and 787, the European Communities has failed even to make a claim that any of the alleged subsidies related to the other Boeing aircraft are causing serious prejudice.) The United States argues that if those alleged subsidies do not cause serious prejudice,

[624] Executive Summary of the United States' second written submission, para. 63.
[625] Executive Summary of the United States' second written submission, para. 64.
[626] Executive Summary of the United States' second written submission, para. 65.

they should play no role in the Panel's analysis. The United States therefore requests the Panel to discount the European Communities' analysis accordingly.[627]

4.385 The United States also notes the European Communities' argument that its inflated $24 billion subsidy estimate is sufficient evidence by itself to establish that the challenged payments caused serious prejudice. The United States submits that the European Communities' arguments are self-contradictory and rely on assumptions contrary to other assumptions the European Communities asks the Panel to make. Specifically, the arguments are contrary to the evidence in that the proper comparisons indicate that the amounts in question did not have any meaningful effect.[628]

4.386 In addition, the United States contends that the European Communities' per-plane alleged subsidy magnitude calculations:

- allocated the alleged subsidies on the basis of "imputed" or "derived" orders, which are not actual orders but actual or estimated deliveries shifted backward in time by three years, so as to artificially inflate the per-plane magnitudes in 2005 and 2006, high order-volume years on which the European Communities' serious prejudice arguments focus;[629]

- treated alleged recurring subsidies as having been received at the imputed/derived time of order (i.e. three years prior to actual or estimated delivery), even though Boeing would not receive the alleged benefit until time of delivery; [630]

- improperly allocated alleged subsidies to Boeing aircraft on the basis of aircraft seats associated with imputed/derived orders, rather than the associated aircraft value;[631]

- treated some alleged subsidies as linked only to the 787 when no such specific link exists;[632] and

- misstated the number of seats that the 787-3 actually has so as to allocate alleged subsidies to the 787-8 and 787-9, which play a larger role in the European Communities' arguments.[633]

4.387 The United States submits that the most egregious of these flaws is the European Communities' use of imputed/derived order data as the basis for its alleged per-plane subsidy allocations.[634] The European Communities has used as its allocation basis actual deliveries and, for much of the 2004-2006 period, estimated future deliveries.[635] The European Communities has failed to provide a legitimate justification for this approach. [636] Despite insisting that the alleged non-recurring subsidies cause "immediate and direct" price effects on orders in the year the subsidies were allegedly received[637], the European Communities' per-plane magnitude allocation methodology matches alleged subsidy magnitude in each year against "orders" that did not actually occur in that

[627] Executive Summary of the United States' second written submission, para. 66.
[628] Executive Summary of the United States' second written submission, para. 67.
[629] United States' comments on the European Communities' response to question 372, para. 241.
[630] United States' comments on the European Communities' response to question 372, para. 241.
[631] United States' comments on the European Communities' response to question 372, para. 241.
[632] United States' comments on the European Communities' response to question 372, para. 241.
[633] United States' comments on the European Communities' response to question 372, para. 241.
[634] United States' comments on the European Communities' response to question 372, para. 242.
[635] United States' comments on the European Communities' response to question 372, para. 242.
[636] United States' comments on the European Communities' response to question 372, para. 242.
[637] United States' comments on the European Communities' response to question 372, para. 242.

year.[638] Thus, even if a per-plane allocation of alleged subsidies were appropriate in this dispute, the European Communities' allocation method renders its per-plane *ad valorem* subsidy magnitudes analytically useless.[639] As the United States has shown, using actual orders as the allocation basis (and keeping all other aspects of ITR's methodology constant) causes the alleged per-plane magnitudes in 2005 and 2006 to fall by roughly 50 per cent.[640]

(iii) Arguments relating to the European Communities' price effects claim

4.388 The United States contends that, with regard to its arguments regarding price effects, the European Communities performs a cursory "counterfactual analysis" in an attempt to meet the SCM Agreement's causation standard. However, this analysis assumes, but does not prove, that in the absence of the alleged subsidies, Boeing's prices would have increased by the amount of the alleged subsidization rate[641] – a proposition that the European Communities concedes is untrue.[642] By contrast, the United States has provided evidence that Boeing always attempts to maximize its profits over time and, therefore, prices its aircraft without regard to any alleged subsidies.[643] There is, then, no basis on which the Panel can reasonably conclude that each dollar of the alleged subsidies would result in an equivalent decrease in Boeing's prices, or that changes in Boeing's prices translate into dollar-for-dollar changes in Airbus prices.[644] The remainder of the European Communities' "price effects" argument relies on (i) the assertion that 100 per cent of a set of alleged tax benefits flow through to the prices Boeing charges its customers, and (ii) an economic analysis (the "Cabral Report"[645]) that assumes the price effects of the other so-called "development subsidies" allegedly given to Boeing. In fact, insofar as Boeing's pricing is concerned, the United States submits that, the evidence, as opposed to the European Communities' assertions and assumptions, is unequivocal on all of the following points:

- Boeing's pricing is market-driven. It seeks the highest prices for its aircraft that the market will bear, without regard to the various payments that the European Communities challenges as subsidies.[646]

- Airbus has deliberately and systematically undercut Boeing's pricing for all three types of large civil aircraft subject to the European Communities' complaint in order to gain market share (the A320), to retain market share (A330), and to compensate for customer dissatisfaction with its competing aircraft (A340 and A350 Original).

Boeing's resistance to the pricing pressure put on it by Airbus is evident in both the campaign-specific evidence and, more generally, Boeing's large market share losses. In fact, the evidence shows that Boeing's market share losses to Airbus were greatest in the period when the alleged price effects were highest, thus disproving the European Communities' claim of a link between the alleged subsidies and

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[638] United States' comments on the European Communities' response to question 372, para. 242.
[639] United States' comments on the European Communities' response to question 372, para. 242.
[640] United States' comments on the European Communities' response to question 372, para. 243.
[641] Executive Summary of the United States' first written submission, footnote 28. European Communities' first written submission, 1396-1402, paras. 1502-1504, and 1597-1599.
[642] Executive Summary of the United States' first written submission, footnote 29. The European Communities' economic model – which assumes the price effects that it purports to derive – estimates that 85 per cent of the value of any subsidy results in a price increase.
[643] United States' response to question 370, para. 252.
[644] United States' response to question 370, para. 252.
[645] Executive Summary of the United States' first written submission, footnote 30. Luís M.B. Cabral, *Impact of Development Subsidies Granted to Boeing*, New York University and CEPR, March 2007, Exhibit EC-4.
[646] Executive Summary of the United States' first written submission, footnote 31. Statement of Clay Richmond, Exhibit US-275.

BCI deleted, as indicated **[***]**

Boeing's pricing.[647] According to the European Communities' calculations, the levels of alleged non-recurring subsidies over the 2004-2006 period were, on average, significantly lower than the levels over the 2000-2003 period.[648] Yet, the 2004-2006 period does not feature a decrease in the types of Boeing investments specified in the Cabral model.[649] In fact, and contrary to the predictions of the Cabral model, Boeing's **[***]**, and product R&D and shareholder payments increased significantly.[650] Thus, no temporal coincidence exists to support the European Communities' price effects theory and the Cabral model on which it is based.[651]

4.389 By contrast, there is a strong temporal coincidence between the alleged indicia of adverse effects and non-subsidy factors:

- Boeing's **[***]**.[652]

- Prices for Airbus' fuel-inefficient A340 **[***]**.[653]

The decline in A380 development costs freed up resources in 2006, which coincided with Airbus finally launching a primarily composite competitor for the 787, the A350 XWB.[654]

4.390 In its further written submissions, the United States argues that the European Communities has failed to rehabilitate its flawed economic analysis, which is the only basis the European Communities put forward in support of its assertion that the alleged subsidies affected Boeing's pricing. The United States recalls that the European Communities, in its first written submission, based the contention that the alleged subsidies affected Boeing's prices on an economic analysis grounded on a series of assertions about how subsidies would affect a company like Boeing and a modeling exercise conducted by Professor Luis Cabral. The United States asserts that its first written submission demonstrated that those assertions were wrong, and that the assumptions underlying Prof. Cabral's model invalidated its results. In its oral statement, the European Communities attempted to restore the credibility of its analysis, but it has not identified any flaw in the U.S. criticisms of the European Communities' reasoning or provided any evidence that validates the many assumptions necessary to reach the conclusion it asks the Panel to reach.[655] In fact, the United States argues that its first written submission and oral statement demonstrated that the evidence before the Panel provides no support for any of these assumptions and, in many instances, disproves them. The European Communities' oral statement did nothing more than present additional assertions that were either without support or were directly contrary to the evidence.[656]

4.391 The European Communities' campaign-specific arguments linking the alleged subsidies to lost sales and price suppression (e.g. that "Boeing's ability to offer a final price concession made the difference in winning or losing the sale") rely entirely on the per-plane magnitude calculations, the per-plane price effects calculated by Professor Cabral, and, to some extent, the ITR economic viability "analysis".[657] Because the works by ITR and Professor Cabral do not prove anything, the

[647] Executive Summary of the United States' first written submission, para. 65.
[648] United States' comments on the European Communities' response to question 370, para. 206.
[649] United States' comments on the European Communities' response to question 370, para. 206.
[650] United States' comments on the European Communities' response to question 370, para. 206.
[651] United States' comments on the European Communities' response to question 370, para. 206.
[652] United States' comments on the European Communities' response to question 370, para. 207.
[653] United States' comments on the European Communities' response to question 370, para. 207.
[654] United States' comments on the European Communities' response to question 370, para. 207.
[655] Executive Summary of the United States' second written submission, para. 68.
[656] Executive Summary of the United States' second written submission, para. 69.
[657] United States' comments on the European Communities' response to question 381, para. 338.

European Communities cannot show any connection between the outcome of specific campaigns and the alleged subsidies, let alone the "genuine and substantial" link required by the SCM Agreement.[658]

4.392 The United States notes that in response to its observation that Boeing prices its large civil aircraft based on its read of the market, the European Communities argued that if "Boeing did not have access to subsidies, it would not have been able to sacrifice current margins in order to increase market share and extract more value from its customers in the future". The United States argues that this is nothing more than an unsubstantiated conclusion. The European Communities presents no evidence suggesting that Boeing's prices would have been any different "but for" the alleged subsidies. The European Communities also argues that "the U.S. assertions" regarding Boeing's use of cash "conflict with the available data" because "the data reveals that there is no statistically significant correlation between subsidies and dividends plus share repurchases" but does show "a clear correlation between firm value and dividends plus share repurchases". However, the absence of any correlation between the alleged subsidies and Boeing's payments to shareholders is perfectly consistent with the U.S. argument. The point the United States is making is that the programmes at issue are not subsidies and do not give Boeing "free cash flow". The United States would not expect any correlation between subsidies that do not actually exist and Boeing's payments to shareholders and, if it proves anything, the fact that there is none proves the U.S. point. And the fact that there is a correlation "between firm value and dividends plus share repurchases" should surprise no one. A firm's stock price and, therefore, its value tend to rise as a firm's returns to shareholders rise. The United States submits that this phenomenon has nothing to do with the alleged subsidies.[659]

(iv) Arguments relating to the European Communities' technology effects claim

4.393 The United States argues that, with respect to "technology effects", the European Communities presents no convincing reason to believe that Boeing would have developed the 787 later or more slowly in the absence of the alleged subsidization. In fact, the evidence demonstrates the opposite. When Boeing committed its resources to the 787 programme, Boeing and Airbus had access to the same composite and other technology. Boeing launched the 787 well before Airbus launched the A350 XWB – the first version of that aircraft to gain market acceptance – because Airbus's resources were, at the time, committed to the A380. Airbus's position in the mid-size aircraft segment was, in other words, a matter of choice – Airbus decided to focus on mastering the technology of a "super-jumbo" aircraft that was designed to service hub-to-hub routes. In contrast, Boeing decided to focus on a smaller, more fuel-efficient point-to-point aircraft that could build on existing, generally available developments in composite technology and reductions in composite costs. Having decided to go in a different direction than Boeing, Airbus compounded its own problem after Boeing's 787 launch by trying to rush the development of a competing "A350" based on a quick reworking of its aging A330. The United States therefore submits that the alleged subsidies to Boeing were never the issue.[660]

4.394 The United States argues that the European Communities also fails to address what EADS has recognized – that the problems that Airbus has faced are problems of its own making, and unrelated to the alleged subsidization. In fact, the United States asserts that the problems Airbus created for itself extend beyond the A380 and A350 issues discussed above. For example, Airbus decided to bring its long-range A340 to market in the 1990s as a four-engine airplane. In an era of low-priced jet fuel, the decision may have been sound. In today's environment of very high-priced jet fuel, however, that decision has only caused problems. The A340 sells poorly because it performs poorly – it has been consistently rated at the very bottom of the large civil aircraft on the market by operators and investors. The United States submits that, for the European Communities to claim, as it does, that

[658] United States' comments on the European Communities' response to question 381, para. 338.
[659] Executive Summary of the United States' second written submission, para. 70.
[660] Executive Summary of the United States' first written submission, para. 66.

subsidies, rather than the poor performance and operating economics of the A340, have caused the A340 to lose sales to Boeing's more fuel-efficient twin engine 777 ignores all evidence regarding sales of these two aircraft.[661]

4.395 The United States alleges that, similarly, in 2000 Airbus committed billions of dollars to its A380 project. The A380, by far the largest commercial airplane ever built, is designed to fly a relatively small number of "hub-to-hub" routes. The United States further asserts that Boeing was always more sceptical about the level of demand for so large an airplane, believing that the greatest growth would be in direct "point-to-point" routes, which allow passengers to reach their destination without changing planes at congested hubs like Frankfurt, London Heathrow, or Tokyo Narita. Therefore, while Airbus was developing the A380, Boeing committed its development resources to the 787, a much smaller, much more fuel efficient aircraft based on composite technology, to fly those point-to-point routes. Because engineering resources are limited, Airbus's decision to focus on the revolutionary A380 meant that it was impossible for it to create an equally revolutionary mid-size aircraft at the same time. Instead, it tried to make do with a low-cost reworking of the A330, calling it a new aircraft family (the "A350") and marketing it in competition with the 787. The successive failures of this approach, as customers rejected ever more elaborate modifications to existing aircraft components, finally led Airbus to launch a truly new aircraft, the A350 XWB, which will not be ready for delivery until 2013, five years after the 787. On this basis the United States argues that the alleged subsidization of Boeing could not have caused Airbus's shortage of qualified engineers, or a series of poor design decisions that customers rejected.[662]

4.396 The United States further asserts that the European Communities does not, and cannot, claim that Airbus' problems with production of the A380 are in any way related to anything done by Boeing. According to the United States, there is no doubt that the costly production delays – the A380 is two years behind schedule and billions of euros over budget – explain most, if not all, of the loss Airbus reported in 2006, and the difficulty Airbus had in finding resources to develop the A350.[663] Thus, the United States submits that the available evidence not only disproves the causation case the European Communities seeks to make, but also proves that the serious prejudice about which the European Communities complains is, in fact, a direct result of product development and pricing choices deliberately made by Airbus. However, the SCM Agreement does not permit the European Communities to attribute to subsidies the effects of such other factors.[664]

4.397 In addition, the United States points to one other significant fact about Airbus's condition that the European Communities neglects to mention in its submission. Although Airbus recently experienced some adversity, the United States contends that its revenues and production are at near record levels, and its commercial situation is improving. The A380 is nearly ready for delivery to customers, and Airbus expects orders to pick up as the aircraft proves itself in revenue service. Airbus decided to scrap the poorly designed Original A350, and start over with the A350 XWB. The European Communities, Airbus, and most analysts predict that the new aircraft will gain more favor with customers.[665] Indeed, Airbus has already received an impressive 232 orders and commitments for the A350 XWB in the six months since programme launch.[666] Airbus has also drastically changed

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[661] Executive Summary of the United States' first written submission, para. 67.
[662] Executive Summary of the United States' first written submission, para. 68.
[663] Executive Summary of the United States' first written submission, para. 69.
[664] Executive Summary of the United States' first written submission, para. 70.
[665] Executive Summary of the United States' first written submission, footnote 32. European Communities' first written submission, para. 1338 ("Airbus is now in a position to offer, with the anticipation of being able to deliver in 2013, a new-generation LCA that exhibits comparable or even better performance than Boeing's 787 family LCA").
[666] Executive Summary of the United States' first written submission, footnote 33. Airbus Press Release, "Renewed momentum for Airbus's leading products, and Paris Air Show with 425 firm orders", 22 June 2007, Exhibit US-377.

its management team and undertaken a cost-cutting plan called "Power 8", which it believes will make it more competitive in a weak dollar environment. While these developments may be consuming revenue and cash flow from the company's financial statements today, they are investments that promise swift future improvements, as is now evident from the A350 XWB order book.[667]

4.398 In its further written submissions, the United States argues that the alleged subsidies are not responsible for Boeing's ability to bring the 787 into commercial service ahead of the European Communities' competing aircraft. The United States notes that the European Communities' arguments on "technology effects" ask the Panel to conclude that in the absence of the alleged subsidies, Boeing would have had to take more time to offer a product superior to the A330, or would have had to settle for offering an immediate competitor that was as good, but not better. In the United States' view, that is the only conclusion possible from its argument that the alleged subsidies – and not Boeing's own efforts – are responsible for the design and timing of the 787. But such a conclusion is contrary to both the evidence and economic rationality.[668]

4.399 In the period under consideration, Airbus engineers were developing two new aircraft – the A380 and the A400M. The European Communities never claims, let alone proves, that Boeing's engineers are less competent than Airbus' engineers. It also never claims, nor proves, that BCA had insufficient funds to cover all of the R&D expenditures that it needed to make. It provides no basis to conclude that Boeing, with this capability and the financial resources to make full use of it, would do nothing except cede market share while Airbus moved ahead with its projects. Rather, the economic incentive, the financial resources, and the engineering capability existed to produce a new aircraft. In short, the United States submits that, whatever the financial effect of the alleged subsidies, there is no basis to conclude that they changed the technological outcome.[669] The United States adds that the European Communities concedes as much. In its summary of the "nature" of the group of subsidies that includes the DOD and NASA research that allegedly had technology effects, the European Communities states, "this second group of subsidies increases Boeing's non-operating cash flow by paying for certain R&D activities that Boeing would otherwise have to finance itself". In other words, according to the United States, the European Communities' causation analysis rests on the proposition that if the alleged subsidies funded research relevant to large civil aircraft, in their absence Boeing would have paid its own money to conduct the same research. Moreover, the United States contends that because the European Communities treats each alleged subsidy as having a cash effect in the year of receipt, it assumes that Boeing would have conducted that research at the same time that it actually did.[670] On this basis, the United States asserts that it demonstrated that the European Communities' analysis of the economic effect of the alleged subsidies is wrong. However, the United States adds that the European Communities is correct in recognizing that Boeing's large civil aircraft technology development agenda would have proceeded without regard to the availability of government funding.[671]

4.400 The United States finally submits that the European Communities' technology effects arguments rest on the assumption that Boeing would not have performed all of the research relevant to the 787 in the absence of the alleged subsidies – an assertion that even the European Communities itself finds to be untrue. Therefore, in the United States' view, the European Communities has failed to make a prima facie case that the alleged subsidies affected Boeing's ability to bring the 787 to commercial use in advance of a competitive product from Airbus.[672]

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[667] Executive Summary of the United States' first written submission, para. 71.
[668] Executive Summary of the United States' second written submission, para. 71.
[669] Executive Summary of the United States' second written submission, para. 71.
[670] Executive Summary of the United States' second written submission, para. 72.
[671] Executive Summary of the United States' second written submission, para. 73.
[672] Executive Summary of the United States' second written submission, para. 74.

BCI deleted, as indicated **[***]**

4.401 In conclusion, the United States maintains that:

(a) Reference Period. The European Communities has tried a number of arguments to exclude pre-2004 data from the Panel's review. The latest is the contention that the Boeing and Airbus "product portfolios" saw a "dramatic" change in the 2004-2006 period. However, a consideration of all the models available for sale in the periods 2001-2003 and 2004-2006 shows that product offerings overlapped extensively.[673]

(b) Aggregation. Where programmes "share a sufficient nexus" with the subsidized product and a particular effects-related variable, the effects of these programs may be aggregated. There is no such nexus between the subsidies that the European Communities alleges "lower the marginal unit costs" of specific Boeing large civil aircraft and the R&D programmes that the European Communities alleges to have subsidized Boeing's R&D.[674]

(c) Magnitude of the alleged subsidy. The $24 billion and $19 billion figures cited by the European Communities are based in large part on analyses that are entirely contradictory to the evidence. Even if every programme challenged by the European Communities were a subsidy – and the United States asserts that they are not – the real value associated with the programmes is far lower than the European Communities asserts, and far lower than any level that can be conceived as having an effect on Boeing's prices or technology.[675]

(d) The magnitude of the subsidies is not sufficient by itself to establish a causal link. Boeing's financial data disprove the European Communities' assertion that "but for" this volume of alleged government funding, Boeing's pricing and product development strategies would have driven it into bankruptcy. During the 2004-2006 period on which the European Communities' adverse effects claim focuses, the funds Boeing spent on stock repurchases were close to twice the amount of the alleged subsidies. Boeing's resources were similarly able to cover any cost funded by the alleged subsidies over the longer 1989-2006 period. These evaluations use the exaggerated European Communities' figures. Obviously, the argument becomes more and more implausible the smaller that number gets.[676]

(e) The European Communities has failed to establish that Boeing's pricing strategy would have changed in the absence of the alleged subsidies. The European Communities alleges that four alleged subsidy programs reduce Boeing's marginal unit costs of large civil aircraft production, and that the company passes that advantage to customers on a "dollar-for-dollar" basis in the form of lower prices. The evidence cited by the European Communities does not support this proposition. With regard to the second group of subsidies, those allegedly provided in the form of R&D programs, the European Communities asserts that a part of the budget of each program is the functional equivalent of "free cash" that Boeing uses to "price aggressively". The United States asserts that it has shown that Professor Cabral's modeling exercise and accompanying report, which underpin the

[673] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 23.
[674] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 24.
[675] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 25.
[676] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 26.

European Communities analysis, are fundamentally unsound. The European Communities response to the U.S. criticisms fails to rehabilitate the Cabral analysis.[677]

(f) The European Communities has not established the existence of any of the types of serious prejudice. The European Communities' core arguments go to the question of how the alleged subsidies affect Boeing's behavior and the marketplace. The United States has shown that the European Communities has not made a prima facie case that such effects occur. Even if it had, the SCM Agreement has a further requirement – that the effects constitute one of the types of serious prejudice enumerated in Article 6.3. However, the evidence does not demonstrate the occurrence of the types of serious prejudice alleged by the European Communities – significant price suppression, significant lost sales, or displacement or impedance.[678]

V. ARGUMENTS OF THE THIRD PARTIES

A. AUSTRALIA

1. Introduction

5.1 Australia focuses on a select few topics which raise significant systemic issues as well as important questions of legal interpretation.[679]

2. Financial contribution

(a) Relevance of the nature of government action

5.2 Australia considers that whether a government action can also be characterised as a particular type of transaction (for example, the 'purchase of services') is irrelevant to the question of whether it constitutes a 'financial contribution' within the meaning of Article 1.1(a)(1). Rather, the relevant question is whether the government action can properly be described as falling within one of the categories of financial contribution set out in Article 1.1(a)(1).[680]

5.3 Australia recalls the statement of the Appellate Body in *US – Softwood Lumber IV* that '{a}n evaluation of the existence of a financial contribution involves consideration of the nature of the transaction through which something of economic value is transferred by a government'.[681] Therefore, Australia submits that it is important to accurately identify the nature of the government action concerned in determining whether it falls within one of the categories of financial contribution.[682]

5.4 In Australia's view, the facts and circumstances surrounding the measure concerned should determine the nature of the government action and, consequently, whether it falls within one of the categories of financial contribution in Article 1.1(a)(1). In other words, it is the nature of the

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[677] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 27.

[678] Executive Summary of the United States' non-confidential oral statement at the second meeting with the Panel, para. 28.

[679] Executive Summary of Australia's written submission, para. 1.

[680] Executive Summary of Australia's oral statement, para. 1.

[681] Executive Summary of Australia's oral statement, footnote 1 referring to Appellate Body Report, *US – Softwood Lumber IV*, para. 52. Executive Summary of Australia's written submission, para. 3.

[682] Executive Summary of Australia's oral statement, para. 2.

government action, and not its characterisation as a particular type of transaction, that determines whether it falls within Article 1.1(a)(1).[683]

(b) Relevance of consideration provided under contractual arrangements

5.5 Australia also considers that whether a recipient provides the government with consideration (either in monetary form or in kind) under a contractual arrangement is irrelevant to the question of whether a particular government action is a financial contribution in terms of Article 1.1(a)(1)(iii) of the SCM Agreement.[684]

5.6 Australia notes the Appellate Body's analysis concerning the definition of a subsidy under Article 1.1 as having two discrete elements of (i) a financial contribution by a government and (ii) the conferral of a benefit.[685] Australia considers it is important to analyse separately these two distinct elements of the subsidy test under Article 1.1. That is, the nature of the government action concerned should be examined separately from what was conferred on the recipient.[686]

5.7 Whether a particular government action is a financial contribution is a separate element of the subsidy test under Article 1.1, distinct from the question of benefit.[687] Article 14(d) of the SCM Agreement provides that the provision of goods or services by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration. This indicates that a financial contribution may exist in cases where inadequate remuneration is provided. Therefore, that a government receives remuneration for goods and services it provides is not of itself sufficient to render the transaction outside the scope of a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement.[688]

5.8 As the European Communities noted in its oral statement, "it is normal practice among governments all over the world to provide R&D support on the basis of contracts".[689] Australia recalls, for example, that in *US – Softwood Lumber III*, the Panel considered the provision of harvesting rights under stumpage contracts to be the provision of a good, notwithstanding that the companies paid a price for these harvesting rights.[690] Similarly, cost-sharing arrangements between private industry and government in conducting R&D, in Australia's view, do not preclude the existence of a financial contribution.[691]

5.9 Therefore, Australia considers it is the nature of the government action, having regard to all the facts and circumstances surrounding the provision of assistance, that should determine whether it constitutes a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement.[692]

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[683] Executive Summary of Australia's oral statement, para. 3.
[684] Executive Summary of Australia's oral statement, para. 4.
[685] Executive Summary of Australia's oral statement, footnote 2 referring to Appellate Body Report, *Canada – Aircraft*, para. 156.
[686] Executive Summary of Australia's oral statement, para. 5.
[687] Executive Summary of Australia's oral statement, footnote 3 referring to Appellate Body Report, *Canada – Aircraft*, para. 156
[688] Executive Summary of Australia's oral statement, para. 6.
[689] Executive Summary of Australia's oral statement, footnote 4 referring to European Communities' non-confidential oral statement at the first meeting with the Panel, para. 68.
[690] Executive Summary of Australia's oral statement, footnote 5 referring to Panel Report, *US – Softwood Lumber III*, para. 7.18.
[691] Executive Summary of Australia's oral statement, para. 7.
[692] Executive Summary of Australia's oral statement, para. 8.

BCI deleted, as indicated **[***]**

(c) Tax assistance

5.10 The Appellate Body in *US – FSC* and *US – FSC (Article 21.5 – EC)* provides guidance on whether tax assistance to Boeing and other aerospace manufacturers constitutes a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement. In Australia's view, the Panel needs to examine whether a tax rate reduction for a particular sector constitutes revenue that is otherwise due that is foregone or not collected, based on a comparison with "taxpayers in similar situations" (i.e. other sectors engaged in business activities of a similar complexity/level of value-add). Based on such a comparison, Australia submits the key question is whether the tax measures concerned "represent a departure" from tax rules that would otherwise apply to that sector.[693] A relevant factor for the Panel to examine is the design of the measures or the "essential shape and the rationale that is exhibited" for those measures in order to "assess the nature of the relationship of the measure at issue with the overall tax regime". The Panel needs to examine the reduction in B&O tax rates for aerospace manufacturing activities in the context of the overall scheme which provides tax assistance to the aerospace manufacturing sector. [694]

(d) R&D assistance

(i) Application of the legal standard to R&D assistance

5.11 Australia notes that there is a range of measures in relation to R&D activities and the "fruit" of those activities before the Panel in this dispute. Australia considers the Panel's consideration of R&D activities and the "fruit" of those activities as financial contributions within the meaning of Article 1.1(a)(1), should include: (i) whether R&D assistance involves the direct transfer of funds (grants); (ii) whether the provision of government-owned property, institutional support, scientists, engineers and research facilities, for example, may also constitute the provision of goods and services; (iii) whether the provision of IP rights may constitute the provision of goods and services; (iv) whether the provision of IP rights may also constitute revenue foregone that is otherwise due where the allocation of patent rights does not reflect market considerations; and (v) the extent to which dual-use technology constitutes the provision of goods and services.[695]

(ii) Range of measures that fall within the meaning of 'financial contribution'

5.12 Australia considers the relevant test to determine whether a particular measure falls within the meaning of financial contribution in Article 1.1(a)(1) of the SCM Agreement is whether the government has provided something of value to the recipient, including an in-kind transfer of resources, that has the potential to artificially lower the costs of producing a product or to artificially increase the revenues gained from selling the product.[696]

5.13 That view is supported by earlier cases. For example, Australia recalls the Appellate Body's statement in *US – Softwood Lumber IV* that '(a) wide range of transactions fall within the meaning of "financial contribution" in Article 1.1(a)(1)'.[697] The Panel in *US – Export Restraints* provides guidance in examining whether R&D activities conducted by government constitute a financial

[693] Australia's written submission, para. 8.
[694] Executive Summary of Australia's written submission, para. 2.
[695] Executive Summary of Australia's oral statement, para. 9. Executive Summary of Australia's written submission, para. 4.
[696] Executive Summary of Australia's oral statement, para. 10.
[697] Executive Summary of Australia's oral statement, footnote 6 referring to Appellate Body Report, *US – Softwood Lumber IV*, para. 52.

contribution: Article 1.1(a)(1)(i)-(iii) covers a broad range of actions whereby a government is "directly providing something of value – either money, goods, or services – to a private entity".[698]

5.14 In relation to the meaning of the term "goods" in Article 1.1(a)(1)(iii), Australia notes that the Appellate Body in *US – Softwood Lumber IV* agreed with the Panel that the ordinary meaning of "goods" includes "property or possessions" especially—but not exclusively—"moveable property".[699] Australia also recalls the statements of the Panel in *US – Softwood Lumber III* that "the sentence 'goods or services other than general infrastructure' refers to a very broad spectrum of things a government may provide".[700]

5.15 Australia also considers it possible that a government assistance measure could comprise more than one financial contribution. Therefore, it is important to examine each element of a measure separately to determine whether it falls within one of the categories of financial contribution in Article 1.1(a)(1).[701]

(iii) Treatment of government 'assistance for research activities' under the SCM Agreement

5.16 Australia considers that the lapsed Article 8 of the SCM Agreement (relating to non-actionable subsidies) provides guidance in considering the treatment of government "assistance for research activities" under the SCM Agreement. In Australia's view, the inclusion of Article 8 clearly indicates that the negotiators considered R&D subsidies to be subject to the SCM Agreement. Article 8.2(a) confirms that assistance by government to a wide range of costs related to R&D, including services and knowledge, would be captured within the meaning of Article 1.1(a)(1)(iii).[702]

5.17 If a company retains the rights to IP that would normally reside with that company, the retention of these IP rights, in Australia's view, would not necessarily constitute an additional financial contribution (over and above the government funding) in the form of the provision of goods within the meaning of Article 1.1(a)(1)(iii), as there has been no transfer of such rights.[703]

5.18 However, Australia considers it is important to have regard to the facts and circumstances surrounding the ownership of the IP rights. In particular, it is necessary to compare the treatment of such rights under the specific contractual arrangements concerned with comparable arrangements for the treatment of IP rights under other U.S. government contracts. In these circumstances, it will be important to have regard to the extent other government contractual arrangements are in fact comparable and the degree to which they can provide a benchmark.[704]

5.19 It is also Australia's view that IP rights developed in the course of a government contract (that is, activities for which the government has provided a financial contribution) would not necessarily constitute an additional financial contribution in the form of foregoing of government revenue that is otherwise due within the meaning of Article 1.1(a)(1)(ii). This would depend on an examination of government contractual arrangements generally and those specifically applying to the company.[705] The financial contribution would be limited to the assistance provided by way of government funding

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[698] Executive Summary of Australia's oral statement, footnote 7 referring to Panel Report, *US – Export Restraints*, para. 8.73. Executive Summary of Australia's oral statement, para. 11.

[699] Executive Summary of Australia's oral statement, footnote 8 referring to Appellate Body Report, *US – Softwood Lumber IV*, para. 58.

[700] Executive Summary of Australia's oral statement, footnote 9 referring to Panel Report, *US – Softwood Lumber III*, para. 7.25. Executive Summary of Australia's oral statement, para. 12.

[701] Executive Summary of Australia's oral statement, para. 13.

[702] Executive Summary of Australia's oral statement, para. 14.

[703] Executive Summary of Australia's oral statement, para. 15.

[704] Executive Summary of Australia's oral statement, para. 16.

[705] Executive Summary of Australia's oral statement, para. 17.

of R&D activities, which would in Australia's view constitute a direct transfer of funds within the meaning of Article 1.1(a)(1)(i).[706] It may be the case that the treatment of the IP rights under a particular government contract could be considered an additional financial contribution in the form of the provision of goods within the meaning of Article 1.1(a)(1)(iii) or the foregoing of revenue within the meaning of Article 1.1(a)(1)(ii). This would depend on all the facts of the particular case and would, in Australia's view, have to involve a transfer of IP rights from the government to the company.[707]

5.20 Australia agrees with Brazil that "if the Panel finds that NASA or the DOD provided goods or services to Boeing, in the form of access to or use of government facilities, equipment, or employees, the Panel should find that the provision of these goods or services constitute a financial contribution under Article 1.1(a)(1)(iii)".[708]

5.21 Australia notes that cost-sharing arrangements between private industry and government in conducting R&D, for example in relation to dual-use technologies, do not preclude the existence of a financial contribution. That is, a financial contribution could still exist in the amount of funding provided by government, regardless of the amount of funding contributed by industry.[709]

5.22 Australia considers the IR&D programme appears to be a mechanism or guideline by which the U.S. Government determines the level of assistance for certain costs related to IR&D activities. It does not alter the consideration of whether R&D funding constitutes a financial contribution.[710]

(iv) R&D assistance under NASA and DOD programmes

5.23 The Appellate Body in *US – Softwood Lumber IV* and the Panel in *US – Export Restraints* provide guidance on the types of transactions considered to be a financial contribution and on the meaning of the term "goods" within the meaning of Article 1.1(a)(1)(iii). Australia considers that the government provision of goods and services under Article 1.1(a)(1)(iii) has a broad meaning and provides guidance on whether ownership of the fruit of the R&D provides a basis for asserting that the funding provides something of value to Boeing.[711]

5.24 In considering whether the U.S. Government's purchase of R&D services from Boeing amounts to government procurement, Australia notes there is no legal basis in the SCM Agreement for exemption from subsidy obligations for government procurement. The characterisation of a transaction as government procurement is irrelevant to whether such a transaction constitutes a financial contribution within the meaning of Article 1.1(a)(1)(iii).[712]

5.25 In the light of the above considerations, Australia submits clarification of the following would be relevant to the Panel's examination of the European Communities' characterisation of R&D activities as financial contributions:[713]

(a) Is it appropriate to characterise the arrangements under which NASA contracts the U.S. LCA industry to conduct R&D as the "purchase of services"? If so, are purchases of services excluded from Article 1.1(a)(1)(iii)?

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[706] Executive Summary of Australia's oral statement, para. 18.
[707] Executive Summary of Australia's oral statement, para. 19.
[708] Executive Summary of Australia's oral statement, footnote 10 referring to Brazil's written submission, para. 22. Executive Summary of Australia's oral statement, para. 20.
[709] Executive Summary of Australia's oral statement, para. 21.
[710] Executive Summary of Australia's oral statement, para. 22.
[711] Executive Summary of Australia's written submission, para. 5.
[712] Executive Summary of Australia's written submission, para. 6.
[713] Australia's written submission, para. 27.

(b) Where the United States claims that the contractual arrangements between NASA and the U.S. LCA industry amount to government procurement, can the R&D activities conducted for NASA be properly characterised as "products purchased for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods for commercial sale"?

(c) Where the United States claims that the contractual arrangements between NASA and the U.S. LCA industry are purchases of services or amount to government procurement, does ownership of the fruit of the R&D under a contract provide a basis for asserting that the R&D funding was such a 'purchase'?

(d) Where the European Communities claims that the transfer of knowledge to the U.S. LCA industry arising from R&D activities conducted by NASA/DOD constitutes a financial contribution, does such a transfer involve the provision of "something of value" or of "goods that might be used by an enterprise to its benefit"?

(e) Can the purchase of services or government procurement simultaneously be a financial contribution or the provision of a service to the U.S. LCA industry?[714]

(v) Dual-use technology

5.26 Australia considers that cost-sharing arrangements in which industry contributes 'matching funding' towards the R&D activities do not preclude the existence of a financial contribution. In the light of this, Australia submits that the Panel should clarify the following in examining whether DOD RDT&E activity involving dual-use technology constitutes a financial contribution under Article 1.1(a)(1):[715]

(a) Is DOD funding to Boeing's Integrated Defense Systems (IDS) division quarantined in the manner described by the United States, or does some funding flow through to Boeing's commercial (BCA) division?

(b) Do any of DOD's R&D programmes (e.g. the Dual Use Science and Technology (DU.S.&T) Program) relate to civil aircraft technology and/or have non-military application?

(c) Do the stringent controls under the U.S. International Traffic in Arms Regulations (ITAR) make it effectively impossible to use controlled technologies on LCA?

(d) Regardless of whether this is the case, is there any potential for cross-subsidisation of R&D from Boeing's IDS division or Phantom Works division to Boeing's BCA division (that is, does Boeing's commercial arm utilise the results of this R&D)? [716]

(vi) Treatment of the fruit of R&D activities

5.27 Australia considers the fruit of the R&D is separate to the issue of funding by the U.S. Government to Boeing to conduct R&D. The Panel should clarify:

(a) What rights does the government receive as part of the exchange of value under contracts with private industry and what rights does the inventor retain?

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[714] Executive Summary of Australia's written submission, para. 9.
[715] Australia's written submission, para. 31.
[716] Executive Summary of Australia's written submission, para. 10.

(b) Is R&D funded through NASA/DOD programmes available either publicly or commercially (either immediately or after a period of time)?

(c) Can IP rights be properly characterised as either the 'provision of a good' or 'revenue foregone that is otherwise due'? [717]

3. Benefit

(a) Legal standard for determining a benefit

5.28 Australia considers that analysis of whether the second limb of the definition of a subsidy has been met, namely whether a benefit has been conferred, requires a comparative assessment. Should the Panel find the existence of a financial contribution, that financial contribution needs to be assessed on whether it has been provided on more advantageous terms than would have been available on the market.[718] Australia considers that where contractual arrangements to provide government assistance to conduct R&D activities are found to constitute financial contributions and where these arrangements do not reflect prevailing market conditions, a benefit is thereby conferred.[719]

(b) Tax assistance

5.29 Australia submits that in determining whether a benefit has been conferred, the Panel should examine whether the tax assistance to the aerospace manufacturing sector results in tax treatment more advantageous than would have been available to the U.S. LCA industry without such tax assistance.[720]

(c) R&D assistance

5.30 Australia considers that Article 14(d) of the SCM Agreement provides guidance for determining whether a benefit is conferred in the context of government transactions.[721] In considering whether a benefit is provided, the Panel should clarify the following:

(a) Where R&D conducted by NASA/DOD is used by the U.S. LCA industry, is the "provision of goods and services" for adequate (or any) remuneration?

(b) Does NASA/DOD own the fruit of the R&D? If so, does ownership of the fruit of the R&D provide a standard (or basis) for asserting that the funding was a purchase?

(c) Does the shifting of the risk involved in conducting R&D from private industry to government constitute a benefit in itself?

(d) Where NASA/DOD contracts private industry to conduct R&D, does the payment to industry represent adequate remuneration?

(e) Does private industry receive any rights to the fruit of the R&D it conducts under contract? If so, can this be considered part of the remuneration for conducting the R&D?

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[717] Executive Summary of Australia's written submission, para. 12.
[718] Executive Summary of Australia's oral statement, footnote 11 referring to Panel Report, *Canada – Aircraft*, para. 9.112.
[719] Executive Summary of Australia's oral statement, para. 23.
[720] Executive Summary of Australia's written submission, para. 13.
[721] Australia's written submission, para. 46.

BCI deleted, as indicated **[***]**

(f) If the fruit of the R&D is provided to the U.S. LCA industry, is it for adequate remuneration? If not, does this confer a benefit additional to the payments (and any benefits arising) under the R&D contracts?[722]

4. General infrastructure

5.31 Australia considers that general infrastructure in the context of Article 1.1(a)(1)(iii) means the provision by government of goods and services that are generally available or multi-user and, as noted by the Appellate Body, infrastructure of a general nature. In determining whether certain infrastructure projects constitute infrastructure-related subsidies to Boeing, the Panel needs to analyse the facts and circumstances including access to such infrastructure and any terms and conditions relating to its use to determine whether it is for exclusive or limited use.[723]

5. Specificity

5.32 Australia considers that important factors to be considered in assessing the specificity under Article 2.1(c) of government programmes such as the DOC Advanced Technology Program (ATP) include the predominant use of the subsidy programme by a limited number of certain enterprises, the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy, evidence that other applicants for the subsidy were overlooked and the "extent of diversification of economic activities within the jurisdiction of the granting authority". The Panel in *Japan – DRAMs* (e.g. para. 7.374) offers guidance on how these factors can be used to assess a specific transaction in the context of a longstanding framework programme.[724]

6. In fact export contingency

5.33 Australia recalls that, in establishing in fact contingency under Article 3.1(a), three elements must be established: (i) the granting of a subsidy; (ii) that is "tied to"; (iii) actual or anticipated exportation or export earnings. Australia recalls that the Appellate Body in *Canada – Aircraft* emphasised that the second element is at "the very heart of the legal standard" and must be considered independently from the third element and evidence of export orientation.[725] Australia considers that evidence of the export nature of a product, and a requirement to establish a production capacity to meet export demand, supports the establishment of a relationship of conditionality but is not conclusive of this second element. A requirement to establish a specified production capacity, taken together with an examination of the estimated demand for a product in the domestic and export markets, is relevant in determining whether the granting of a subsidy is "tied to" export performance. However, such an examination would need to take into account that capacity to produce is one relevant factor, distinct from actual production.[726]

5.34 Australia recalls that the Appellate Body in *Canada – Aircraft* also noted that to establish export contingency, the requisite relationship of contingency "must be inferred from the total configuration of the facts constituting and surrounding the granting of the subsidy, none of which on its own is likely to be decisive in any given case". In Australia's view, such relevant facts could include: an analysis of the nature of the product; the design and form of the subsidy; the export propensity of the product; performance requirements or conditions attached to the granting of the subsidy (including, for example, the requirement to establish a specified production capacity); any

[722] Executive Summary of Australia's written submission, para. 14.
[723] Executive Summary of Australia's written submission, para. 15.
[724] Executive Summary of Australia's written submission, para. 16.
[725] Australia's written submmission, para. 59, referring to Appellate Body Report, *Canada – Aircraft*, para. 171.
[726] Executive Summary of Australia's written submission, para. 17.

distinction made between domestic and export sales in relation to repayment requirements; the level of sales requirements relative to domestic demand; and official statements by governments indicating the intention behind the granting of the subsidies. The possibility that there may be some sales that do not involve exportation does not necessarily sever the tie to anticipated exportation.[727]

7. Adverse effects

(a) Reference periods to assess serious prejudice

5.35 Australia points out that the Panel in *US – Upland Cotton* provides guidance on an appropriate reference period for assessing adverse effects, namely, a historical recent period for which essentially complete data exists. "Current" serious prejudice will be "established to exist up to, and including, a recent point in time". This is also consistent with the references to consistent trends and appropriately representative periods in Articles 6.3(d) and 6.4 of the SCM Agreement.[728]

(b) Cumulative effects

5.36 Australia also considers that it may be relevant to assess the effects of subsidies in terms of the cumulative effects of certain subsidies. Subsidies should only be aggregated where appropriate for an adverse effects claim and where an appropriate nexus exists between those subsidies, based on the nature of the subsidies.[729]

(c) Threat of serious prejudice

5.37 Australia notes that the panel report in *US – Upland Cotton* suggests that the threat of serious prejudice can be established by an examination of the likely existence of serious prejudice at some future point in time. Australia considers that current effects of the subsidies are relevant because, in the absence of a significant change in circumstances, they will indicate the likelihood that the subsidies would continue to cause serious prejudice in the future. Consequently, the same facts may be relevant in establishing both present serious prejudice and threatened serious prejudice.[730]

B. BRAZIL

1. Introduction

5.38 From the outset Brazil notes that its participation in this dispute is based on its long-standing, systemic interest in the interpretation of the SCM Agreement, particularly in relation to the civil aircraft industry. Brazil's submissions focus on (i) the Annex V procedure and burden of proof; (ii) the potential that government contracts for research and development could be used to shield Members from their obligations under the SCM Agreement; (iii) subsidies disguised as the "purchase of services"; (iv) specificity; (v) financial contributions to third parties; (vi) the potential for access to government personnel and facilities to qualify as financial contributions; (vii) adverse effects; (viii) theories of causation; and (ix) the lack of relevance of the 1992 Agreement to this dispute.[731]

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[727] Australia's written submmission, paras. 62 and 63, referring to Appellate Body Report, *Canada – Aircraft*, para. 167.
[728] Executive Summary of Australia's written submission, para. 18.
[729] Executive Summary of Australia's written submission, para. 19.
[730] Executive Summary of Australia's written submission, para. 20.
[731] Executive Summary of Brazil's oral statement, para. 1; Brazil's written submission.

BCI deleted, as indicated **[***]**

2. The failure of the United States to cooperate in the Annex V process threatens to undermine the WTO dispute settlement process and should result in the use of adverse inferences where appropriate

5.39 Brazil argues that the Annex V procedure is critical to the ability of Members to protect their rights under the SCM Agreement. Based on the text of Annex V, the DSB should automatically initiate the relevant procedures upon a request from a complainant, and WTO Members are obligated to cooperate in the Annex V procedure. Accordingly, in the interest of the timely and efficient resolution of disputes, Members should not block the initiation of Annex V procedures at the DSB and should fully cooperate by providing requested information.[732]

5.40 Brazil notes that the United States argues that it refused to participate in the Annex V procedure in DS353 because the European Communities' Preliminary Ruling Request amounted to an "unprecedented" second request covering the "same topic" as the Annex V procedure in DS317. In Brazil's view, there is no textual basis under the DSU to support the U.S. argument that a Member's rights or obligations under the Annex V procedures can be limited by anything arising in a previous dispute.[733]

5.41 Paragraph 7 of Annex V of the SCM Agreement states that a panel "should draw adverse inferences from instances of non-cooperation by any party involved in the information-gathering process". By establishing a penalty for non-compliance in the form of adverse inferences, Annex V provides an incentive for Members to cooperate. To the extent that the United States has refused to provide information or otherwise failed to cooperate, Brazil encourages the Panel to use its discretion to draw adverse inferences, where appropriate, and thereby ensure that Annex V remains an effective tool for the resolution of disputes under the SCM Agreement.[734]

5.42 In its oral statement Brazil notes that it has continuing concerns regarding the Annex V procedure, including the implications of the Annex V procedure on burden of proof. In Brazil's view, the Annex V procedure is particularly critical in cases such as this one in which the relevant information is almost exclusively contained in confidential documents held by the subsidizing Member. The Panel should use its discretion to draw adverse inferences and to make other findings, where appropriate, in order to ensure that Annex V remains an effective tool for the resolution of disputes under the SCM Agreement.[735]

5.43 Brazil also notes that the Annex V procedure is important in the context of determining whether the complaining Member has met its burden of proof to establish a prima facie case. In this context, a panel should take into consideration whether evidence important to meeting the burden of proof is primarily in the hands of the responding Member and whether the responding Member withheld evidence, in whole or in part, during the Annex V procedure. Thus, Brazil submits that, in examining whether the European Communities has met its burden of proof by presenting sufficient evidence to substantiate its claims, the Panel should take due account of any U.S. failure to cooperate in the Annex V procedure and, accordingly, should draw adverse inferences where appropriate.[736]

[732] Executive Summary of Brazil's written submission, para. 1.
[733] Executive Summary of Brazil's written submission, para. 2.
[734] Executive Summary of Brazil's written submission, para. 3.
[735] Executive Summary of Brazil's oral statement, para. 2.
[736] Executive Summary of Brazil's oral statement, para. 3.

BCI deleted, as indicated **[***]**

3. Funding under a government contract for research and development should not be used to shield a Member from its obligations under the SCM Agreement

5.44 Brazil notes that the United States argues that Article 1.1(a)(1)(iii) of the SCM Agreement defines a financial contribution to include "purchases of goods" but does not refer to "purchases of services" and, thus, "when the government confers something of value in exchange for the recipient supplying a service, there is no financial contribution".[737]

5.45 In Brazil's view, the U.S. attempt to exclude government research and development measures from the scope of the SCM Agreement has the potential to undermine the effectiveness of the SCM Agreement. If the U.S. position were to prevail, Members could provide billions of dollars in payments directly to a manufacturer and shield this funding from WTO scrutiny by simply entering into a "contract" declaring that the funding is in return for a nominal amount of research and development, consulting, or other services. Such an enormous loophole was not intended by the drafters, and, accordingly, the Panel should reject the U.S. interpretation.[738]

5.46 In contrast to the absolute U.S. position, Brazil considers that the facts and surrounding circumstances should dictate whether a particular payment of money or monetary contribution to a recipient falls within the scope of Article 1.1(a)(1) of the SCM Agreement. The fact that the government's transfer of money is nominally made within the framework of a services agreement or other type of contract should not, without further examination, be sufficient to determine that the transfer could not amount to a financial contribution within the meaning of the SCM Agreement.[739]

4. Subsidies disguised as purchases of services

5.47 As indicated above, Brazil opposes the attempt by the United States to undermine the effectiveness of the SCM Agreement by excluding from the scope of the SCM Agreement any transaction allegedly involving the purchase of services. In Brazil's view, WTO Members should not be able to circumvent the disciplines of the SCM Agreement by characterizing financial contributions as the purchase of services. Brazil disagrees with the United States that government purchases of services are excluded, *ipso facto*, from the scope of Article 1.1(a)(1). The text of Article 1.1(a)(1) of the SCM Agreement does not contain any exclusion for "purchases or services". Brazil believes that the reference at the end of Article 1.1(a)(1)(iii) to the purchase of goods but not to the purchase of services may have been intended to maintain a separation between subsidization of goods and subsidization of services. Brazil argues that the omission of the purchase of services from the list of financial contributions in Article 1.1(a)(1) was not intended to create any carve-out from subsidy disciplines.

5.48 Brazil posits that two hypothetical transactions could help to clarify the scope of the SCM Agreement:

- First, assume that a government enters a services contract with an LCA manufacturer under which the government pays $10 billion in exchange for transport by the manufacturer of a letter from Chicago to Washington, DC.

- Second, assume that a government enters a services contract with a law firm for $10 billion in exchange for a one-page legal opinion.

[737] Executive Summary of Brazil's written submission, para. 4.
[738] Executive Summary of Brazil's written submission, para. 5.
[739] Executive Summary of Brazil's written submission, para. 6.

These examples demonstrate what should and should not be within the purview of the SCM Agreement. Because a law firm is normally engaged exclusively in the provision of services, the government's procurement of services from such firm has no discernible linkage to the production or trade of any goods. The $10 billion payment may be a subsidy to the law firm, but because it relates solely to the supply of services, it is not covered within the scope of the SCM Agreement. In contrast, the LCA manufacturer's contract would clearly involve a direct transfer of funds that would likely affect the manufacturer's production or trade of goods. The fact that the transaction is disguised as the purchase of courier, postal, or similar transportation services does not change the fundamental characteristic of the transaction as a financial contribution within the meaning of Article 1.1(a) of the SCM Agreement.[740]

5.49 In Brazil's view, transactions involving research and development constitute financial contributions under the SCM Agreement to the extent that they are linked to the production and trade of goods. To automatically disregard payments on the basis that they were made pursuant to a contract for the provision of a service to the government, particularly in instances where the work undertaken was in the clear interest of the contractor in the first place, would be contrary not only to the purpose of the SCM Agreement but to common sense as well. In any event, Brazil considers that the facts and surrounding circumstances should dictate whether a particular transaction involves the provision of a financial contribution to a recipient within the meaning of Article 1.1(a)(1) of the SCM Agreement.[741]

5. The Panel should not interpret "group of enterprises or industries" under Article 2.1 too narrowly, particularly when analyzing subsidies in the aircraft sector

5.50 Brazil notes that the United States contends that "research-based defense and aerospace industries" are not "an enterprise or industry or group of enterprises or industries" within the meaning of Article 2.1 of the SCM Agreement, and thus, subsidies limited to such entities are not *de jure* specific. In Brazil's view, if the facts demonstrate that access to subsidies is expressly limited to a certain group of entities or industries, even if the group is large and diverse, the Panel should find that it constitutes a "group of enterprises or industries" within the plain meaning of Article 2.1 of the SCM Agreement.[742] A finished aircraft, for example, results from the coming together of an enormously complex and voluminous collection of intermediate products and technology associated with diverse and often unrelated industries (e.g. composites and telecommunications).[743]

6. A financial contribution to an unrelated third party may confer a benefit on Boeing

5.51 Brazil notes that the United States argues that certain funding does not constitute a subsidy because it was provided to unrelated third parties rather than directly to Boeing. In Brazil's view, Article 1.1 of the SCM Agreement does not limit the recipient of a benefit to the entity that received the financial contribution from the government. In both *Brazil – Aircraft* and *Canada – Aircraft*, panels and the Appellate Body found prohibited export subsidies to the respective aircraft manufacturers when financial contributions to third parties indirectly conferred a benefit on the manufacturers. This same logic would apply here if the facts demonstrate that research and development funding to an unrelated third party indirectly conferred a benefit on Boeing.[744]

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[740] Executive Summary of Brazil's oral statement, para. 5.
[741] Executive Summary of Brazil's oral statement, para. 6.
[742] Executive Summary of Brazil's written submission, para. 7.
[743] Brazil's written submission, para. 16.
[744] Executive Summary of Brazil's written submission, para. 8. See also, Executive Summary of Brazil's oral statement, para. 7.

5.52 Brazil points out that the United States also argues that any subsidies to unrelated third parties can only confer a benefit on Boeing if the European Communities demonstrates that the benefit is passed-through from the unrelated recipient of the financial contribution to Boeing. In Brazil's view, the Panel should take into account the facts and surrounding circumstances in the LCA sector and should not impose any particular requirements for a strict input/final product pass-through analysis in examining whether a financial contribution to a third party benefits Boeing.[745]

5.53 In Brazil's view, the traditional pass-through analysis contemplated by the United States may not be appropriate in the context of research and development funding or other types of subsidies for the aircraft sector. The situation in this dispute may be more similar to *Canada – Aircraft* and *Brazil – Aircraft*, where the nature of the alleged subsidies and the surrounding facts and circumstances demonstrated that subsidies to an unrelated third party indirectly conferred a benefit to the manufacturer. Thus, in Brazil's view, the Panel should take into account the facts and surrounding circumstances in the LCA sector and should not impose any requirement for a strict input/final product pass-through analysis in examining whether a financial contribution to a third party benefits Boeing.[746]

7. The U.S. Government's provision of facilities, equipment, and employees to Boeing may constitute financial contributions conferring a benefit

5.54 Brazil notes that the European Communities claims that NASA and DOD have provided Boeing with substantial research and development support through no-cost access to NASA and DOD facilities, equipment, and employees. If the Panel finds that NASA or the DOD provided goods or services to Boeing, in the form of access to or use of government facilities, equipment, or employees, the Panel should find that the provision of these goods or services constitutes a financial contribution under Article 1.1(a)(1)(iii) of the SCM Agreement. If such goods and services were provided on terms and conditions that are below-market, i.e. not for adequate remuneration in comparison to an appropriate commercial benchmark, the Panel should find that a benefit was conferred on Boeing within the meaning of Article 1.1(b).[747]

5.55 In addition, the United States argues that NASA's provision of goods or services is exempt from scrutiny under the SCM Agreement because such contributions are payments for services purchased by Boeing. As discussed above, this argument exemplifies how a WTO Member may attempt to circumvent the disciplines of the SCM Agreement by characterizing financial contributions as falling within the "purchases of services" loophole advocated by the United States.[748]

8. Adverse effects

5.56 In response to the parties' arguments regarding adverse effects, Brazil provides the following comments:

(a) Conditions of Competition: In conducting its serious prejudice analysis, the Panel should consider the conditions of competition in the LCA market. These conditions are critical to ensuring that the rights and obligations of both the parties and third parties under the SCM Agreement are fully protected in this dispute.

(b) "Subsidized Product": The SCM Agreement does not define the "subsidized product", and, thus, it provides no guidance as to whether the "subsidized product"

[745] Executive Summary of Brazil's written submission, para. 9.
[746] Executive Summary of Brazil's oral statement, para. 8.
[747] Executive Summary of Brazil's written submission, para. 10.
[748] Executive Summary of Brazil's written submission, para. 11.

should be defined narrowly or broadly. In Brazil's view, the Panel should provide the European Communities substantial discretion as the complaining party to define the "subsidized product" to which its claims apply.

(c) "Like Product": Footnote 46 of the SCM Agreement defines "like product" for purposes of the SCM Agreement. Accordingly, Brazil is of the view that "like products" corresponding to the "subsidized products" should be analyzed in accordance with this definition. To the extent that the European Communities' identification of the "like product" is in accordance with this definition, the Panel should not second-guess the complainant.

(d) Definition of the "Market": In Brazil's view, the LCA market may be considered a global market that in turn may encompass individual country markets and collections of individual country markets. Brazil disagrees with the U.S. interpretation that the term "market" in Article 6.3 cannot be applied to individual countries unless the number of potentially relevant transactions exceeds some numerical threshold.

(e) Cumulation: In Brazil's view, in making its findings under Article 6.3(c), the Panel should cumulate the challenged subsidies on the basis of whether they would result in prices lower than those that would have been charged otherwise (the particular "effects-related variable" under consideration). Brazil is also of the view that, if the Panel cumulates subsidies in making its findings on price suppression, it should also, to maintain consistency, cumulate subsidies in making its findings on displacement/impedance and lost sales. Finally, Brazil disagrees with the U.S. classification of the challenged subsidies into four separate categories because the United States has not explained how the subsidies in the different categories have different effects based on the test set out in *US – Upland Cotton*.

(f) Quantification of the Subsidies: Although general quantification of the magnitude of subsidization may assist the Panel in assessing the effects of the subsidies, neither Article 6.3(c) nor Part III of the SCM Agreement establishes a particular methodology for calculating the magnitude of subsidization or a legal threshold below which subsidies cannot cause serious prejudice. In the absence of such guidance, the Panel should not require a particular level of precision in assessing the magnitude of the subsidies and should not adopt specific methodologies or minimum thresholds in this dispute.

(g) Quantification of the Price Effects: Brazil submits that precise quantification of the price effects of subsidization has no textual support in the SCM Agreement and is not necessary for making findings under Article 6.3(c), or Part III generally. Brazil agrees that the Panel may consider the magnitude of the subsidy in determining whether the alleged price effects are "significant", but this does not require a precise quantification of either the alleged subsidies or the consequent price effects.

(h) Order Versus Delivery Data: Consistent with the Appellate Body's reasoning in *US – Upland Cotton*, serious prejudice may be demonstrated in a variety of ways. In Brazil's view, the Panel should not find that specific forms of serious prejudice or threat of serious prejudice under Article 6.3 must be demonstrated using orders or deliveries. A complainant could satisfy its burden to demonstrate serious prejudice using either order or delivery data.

(i) "But For" Test for Causation: Although both parties rely upon a "but for" test for causation, there is no basis in the text of the SCM Agreement for the U.S. statement

to the effect that the Agreement "requires" this kind of test, and the Panel should not make any findings that would effectively preclude the use of other causation methodologies in other cases, including those involving the aircraft sector.

(j) Lost Sales: The United States argues that the parties agree that a "but for" test is appropriate for examining "lost sales", and, therefore, the Panel must evaluate what price Boeing would have charged in the absence of subsidies and whether that price would have been sufficiently higher for the customer to choose Airbus. Brazil considers that the United States is proposing a test that is too rigid and that is not justified by the text of the SCM Agreement. In Brazil's view, depending on the facts and surrounding circumstances, the Panel may find that subsidies are causing lost sales, and thus serious prejudice within the meaning of Article 6.3(c) of the SCM Agreement, even where price is not the "decisive" or predominant factor resulting in the lost sales.

(k) "Cash Flow Effects": In Brazil's view, the Panel's findings regarding the European Communities' claims of adverse price effects should not be made contingent on whether the evidence of additional cash flow is found in the financial data of the subsidized producer.

(l) Airbus' Financial Condition: Brazil disagrees with the U.S. arguments that Airbus' financial and market position precludes the possibility that the European Communities is suffering serious prejudice caused by subsidies. With respect to impedance and displacement, for example, Article 6 of the SCM Agreement does not make any reference to the financial condition of the producer of the like product and does not indicate that the relative market shares at any particular point in time are relevant. Rather, the issue is whether Airbus' market share would be greater absent the subsidized Boeing product.

(m) No Additional Requirement to Demonstrate That The Effects Are "Serious": Both parties contend that to demonstrate serious prejudice under Article 6.3, the complainant must demonstrate that the effects rise to the level of "serious". This interpretation has been expressly rejected in prior disputes, and the Panel should not adopt such a requirement based on agreement of the parties.

(n) "Lag" Between Granting of Subsidies and Serious Prejudice: Because of the significant period between development, production, and sale of aircraft, the effects of subsidies granted early in the period (*e.g.*, for research and development) may not manifest themselves until much later in time when actual sales of the aircraft take place. Thus, a strict requirement to show "coincidence in time" between the alleged subsidies and the alleged effects would make the showing of causation unreasonably difficult in the aircraft sector. Accordingly, in analyzing causation in this case, the Panel should take into consideration the potential "lag" between the granting of the alleged subsidies and their possible adverse effects.[749]

9. Theories of causation

5.57 Generally, Brazil considers that the Panel should focus on making its findings on a more straightforward causation analysis consistent with that adopted by the panels in *US – Upland Cotton* and *US – Upland Cotton (Article 21.5 – Brazil)*. The European Communities has presented its case

[749] Executive Summary of Brazil's written submission, para. 12. See also, Executive Summary of Brazil's oral statement, para. 11, 12, 13,14, 15, 16 and 17.

by using complex economic models and by tracing the application of cash flows according to Boeing's financial statements. Brazil cautions the Panel not to adopt findings that would effectively require the use of such complex models and methodologies to demonstrate causation under the SCM Agreement, as any such requirement would lack textual support in the SCM Agreement.[750]

5.58 Moreover, even if, as the European Communities argues, the subsidies involved were provided in the form of cash grants that were simply redirected to shareholders as dividend payments, these increased dividend payments would send a signal to financial markets of improvement in the company's financial situation and would lower its cost of capital. Similarly, if all subsidies were used to reduce a company's debt, this would directly lower its financial costs and would also represent a significant improvement in the company's financial situation at the government's expense. When subsidies are used to improve a company's financial situation, they may enable such company to take actions that have trade-distorting effects and that the market would otherwise not allow, such as, for example, maintaining inefficient production capacity. In Brazil's view, the approach apparently endorsed by the parties in this dispute, to the extent that it neglects this possibility, would open a loophole in the SCM Agreement and does not reflect an appropriate causation analysis.[751]

10. The Panel should reject the European Communities' arguments in relation to the 1992 Agreement

5.59 The European Communities argues that the 1992 Agreement is a relevant rule of international law to be taken into account when interpreting the SCM Agreement in this dispute and that a U.S. violation of the 1992 Agreement would constitute serious prejudice under Article 5(c) of the SCM Agreement.[752]

5.60 In Brazil's view, the Panel should reject the European Communities' arguments for the following reasons: (i) the SCM Agreement is the appropriate instrument to address subsidies in the civil aircraft industry in a WTO dispute settlement proceeding; (ii) the 1992 Agreement is not a WTO covered agreement, and it is outside the Panel's terms of reference; (iii) an appropriate analysis should lead the Panel to find that an alleged substantive violation of the 1992 Agreement cannot constitute "serious prejudice" with the meaning of Article 5(c) of the SCM Agreement; (iv) the 1992 Agreement cannot be used to interpret provisions of the SCM Agreement because it does not assist the Panel in determining the common intent of all WTO Members; and (v) in the alternative, any interpretation of the SCM Agreement based on the 1992 Agreement can only apply to the bilateral relations between the United States and the European Communities.[753]

C. CANADA

1. Introduction

5.61 In its third party submission, Canada contends that this dispute will have important consequences for the development and production of civil aircraft. Canada is participating because of its role as one of the world's major aircraft producers and its interest in the interpretation of the SCM Agreement.[754]

5.62 Taken together, Canada's oral statement and written submission addressed questions regarding six issues: (i) purchase of services; (ii) intellectual property rights; (iii) general

[750] Executive Summary of Brazil's oral statement, para. 9.
[751] Executive Summary of Brazil's oral statement, para. 10.
[752] Executive Summary of Brazil's written submission, para. 13.
[753] Executive Summary of Brazil's written submission, para. 14.
[754] Executive Summary of Canada's written submission, para. 1.

infrastructure; (iv) the U.S. Department of Commerce's Advanced Technology Program and specificity; (v) de facto export contingency, and (vi) serious prejudice.

2. Purchase of services

5.63 Canada notes that this dispute is the first under the SCM Agreement to address the question of whether a government's purchase of a service can be the subject of a claim under Parts II, III or V of the SCM Agreement. In Canada's view, the answer is that it cannot be – provided, however, that the transaction in question is a legitimate purchase of a service and is not simply designed to camouflage a financial contribution that would otherwise fall within the list of financial contributions set out in Article 1.1(a)(1) of the SCM Agreement.[755]

5.64 In responding to the Panel's questions, Canada agrees with the United States that the list of financial contributions in Article 1.1(a)(1) is an exhaustive list of the kinds of financial contributions that can give rise to a subsidy. Canada also agrees that the omission of any reference to the purchase of services from this list must be given some meaning – particularly since the purchase of services was included in the list in some of the negotiating texts before being dropped from the final text.[756]

5.65 Furthermore, Canada notes that Article XV of the GATS indicates that the regulation of subsidies in respect of services is a task for a future work programme of the Members. Even if the Panel were to find some merit to the argument that this omission in the SCM Agreement was made in deference to the GATS, the incomplete work programme of the Members in respect of service subsidies provides a good reason for the Panel to exercise caution in this area.[757]

5.66 Australia and Brazil have both advanced the argument that Article 8.2(a), now lapsed, is proof that no carve-out from subsidy disciplines was intended for the purchase of services. Article 8.2(a), when in force, provided that "assistance for research activities conducted by firms or by higher education or research establishments on a contract basis with firms" was non-actionable if certain conditions were met.[758] In Canada's view, Article 8.2(a) does not establish that legitimate purchases of services were intended to come within the scope of the SCM Agreement. Article 8.2(a) only demonstrates that financial assistance for research activities provided on a contract basis was never categorically excluded from the SCM Agreement. However, "assistance" is not synonymous with "purchase", and it is the purchase of services that was omitted from Article 1.[759]

5.67 According to Canada, government assistance for a firm to conduct research, or for a firm to contract for research with another institution does not entail the purchase or acquisition of a service by the government. Rather, it is the firm that is conducting or contracting for the research. Therefore, the recognition in lapsed Article 8.2(a) that government assistance for a firm's research activities would be subject to the SCM Agreement, unless certain conditions were met, in no way conflicts with an exclusion in Article 1 for the purchase of services by a government.[760]

5.68 Canada does agree with Australia and Brazil that the omission from Article 1 of any reference to the purchase of services should be interpreted narrowly to avoid circumvention of subsidy disciplines. A Member's characterization of one of its own transactions as a purchase of a service

[755] Executive Summary of Canada's oral statement, para. 2.
[756] Executive Summary of Canada's oral statement, para. 3.
[757] Executive Summary of Canada's oral statement, para. 5.
[758] Executive Summary of Canada's oral statement, para. 6.
[759] Executive Summary of Canada's oral statement, para. 7.
[760] Executive Summary of Canada's oral statement, para. 8.

should not preclude a panel from determining the true nature of the transaction at issue. This is a question of fact to be weighed by a panel and must be done on a case by case basis.[761]

5.69 Notwithstanding the anti-circumvention concern, the silence in Article 1.1 respecting the purchase of services should be understood to exclude from the SCM Agreement those cases where a government can prove that it has genuinely purchased services, and that it is not attempting to disguise a direct transfer of funds or other form of financial contribution within the scope of Article 1.1(a)(1) as the purchase of a service.[762]

3. Intellectual property rights

5.70 Canada notes that the European Communities claims that NASA and the U.S. DOD together have waived/transferred an estimated 228 patents to Boeing and McDonnell Douglas. Further, the European Communities alleges that Boeing has "received" trade secrets from the U.S. Government as well as having benefited from valuable technical data developed by Boeing through its government-funded research. According to the European Communities, patents, trade secrets and technical data are all "goods" provided by government within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[763]

5.71 Canada argues that, regardless of whether or not these intangible rights are "goods", the European Communities claims under Article 1.1(a)(1)(iii) fail because these IP rights are not provided to Boeing by any government. They are simply retained by Boeing as the original owner or developer of the patents, trade secrets and data at issue.[764]

5.72 Canada points out that the European Communities concedes that the patents at issue originate with Boeing in stating that U.S. patent laws, regulations and policies benefit Boeing because they "generally grant government contractors the option to retain title, with some limitations, to inventions that arise from a funding agreement with the Federal Government". An option to retain title is not a transfer, provision or contribution. In respect of trade secrets, the European Communities appears to be primarily concerned with Boeing trade secrets rather than NASA trade secrets. Boeing's use of its own trade secrets, however, cannot form the basis of a subsidy claim as there is clearly no transfer, provision or contribution. The European Communities' claim in respect of the "transfer of technical data" references only "technical data developed by Boeing through government-funded research". This claim does not encompass any provision to Boeing of technical data developed by a governmental entity or agent.[765]

5.73 Thus, Canada considers that the European Communities claims fail at the most basic level. A retention of a right to property by a contractor cannot constitute a contribution by government.[766]

5.74 Canada notes that the European Communities has raised an alternative claim that the retention by Boeing of IP rights developed in the course of a government contract constitutes "the foregoing of government revenue that is otherwise due" within the meaning of Article 1.1(a)(1)(ii). To support this assertion, the European Communities notes that "entities making use of a government's IP rights would ordinarily need to pay license fees for such use". However, this alternative claim again

[761] Executive Summary of Canada's oral statement, para. 9.
[762] Executive Summary of Canada's oral statement, para. 10.
[763] Executive Summary of Canada's written submission, para. 2.
[764] Executive Summary of Canada's written submission, para. 3.
[765] Executive Summary of Canada's written submission, para. 4.
[766] Executive Summary of Canada's written submission, para. 5.

assumes that the IP rights at issue were, at some point, the property of the U.S. Government. They never were. For this reason, the European Communities alternative claim also fails.[767]

4. General infrastructure

5.75 The European Communities alleges that road improvements near Boeing's Everett facility and improvements to the Port of Everett are subsidies, despite the fact that they are general infrastructure excluded from the SCM Agreement by Article 1.1(a)(1)(iii). Canada takes this opportunity to elaborate on the analysis required by the general infrastructure exclusion in Article 1 and to apply that analysis to the facts of this dispute.[768]

(a) The scope of the general infrastructure exclusion

5.76 The Appellate Body has ascribed an expansive meaning to the word "goods" in Article 1.1(a)(1)(iii) of the SCM Agreement. However, the SCM Agreement and WTO jurisprudence offer little guidance on the considerations relevant to the determination of whether government provided infrastructure is of a "general" or non-general nature. This Panel has an opportunity to clarify the analysis required.[769]

5.77 Canada notes that according to the rules of interpretation set out in Article 31 of the Vienna Convention, the meaning of a term is to be determined by reference to its ordinary meaning, read in the light of its context, and the object and purpose of the treaty. The ordinary meaning of "infrastructure" is "the installations and services (power stations, sewers, roads, housing, etc.) regarded as the economic foundation of a country". There is no disagreement that the public works at issue qualify as infrastructure.[770]

5.78 Canada considers that the disagreement is whether the improvements to the road network and port facilities are "general" or "other than general". The word "general" has a number of ordinary meanings, the most relevant of which is "not specifically limited in application; relating to a whole class of objects, cases, occasions, etc". The phrase "not specifically limited in application" as distinguished from the broader phrase "not limited in application" helps convey the concept that, for government-provided infrastructure to be transformed from "general" to non-general or restricted application, the limitation must be clearly specified.[771]

5.79 In Canada's view, whether infrastructure is general or other than general is closely tied to its availability for use by the public. An understanding of general infrastructure that encompasses any facility or service available to the public is confirmed by the negotiating history of the exclusion. In particular, Canada notes the roots of the general infrastructure exclusion in proposals by the Canadian Chief Negotiator in 1988 that basic infrastructure available "for general public use" be excluded from the SCM Agreement's disciplines.[772]

5.80 Canada notes that the panel in *US – Export Restraints* found, the Article 1 subsidy definition "was drafted with the express purpose of ensuring that not every government intervention in the market would fall within the coverage of the Agreement". Article 1.1(a)(1)(iii) should not be interpreted too narrowly so as to undermine that purpose.[773]

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[767] Executive Summary of Canada's written submission, para. 6.
[768] Executive Summary of Canada's written submission, para. 7.
[769] Executive Summary of Canada's written submission, para. 8.
[770] Executive Summary of Canada's written submission, para. 9.
[771] Executive Summary of Canada's written submission, para. 10.
[772] Executive Summary of Canada's written submission, para. 11.
[773] Executive Summary of Canada's written submission, para. 12.

BCI deleted, as indicated **[***]**

5.81 Canada argues that the roads and ports in question in this dispute are public. As such improvements to these roads and the port facilities are improvements to general infrastructure. The European Communities has identified no measure that restricts the ability of the general public to use the improved road network or port facility at issue.[774]

(b) The appropriate treatment of improvements to general infrastructure under the SCM Agreement when the improvements are of particular benefit to certain users

5.82 Canada argues that nothing in the SCM Agreement indicates that improvements to general infrastructure that significantly benefit a limited number of users should change the status of general infrastructure when it remains available to the public. The public reasonably expects that a government will maintain and improve general infrastructure in the public interest, for instance to permit the supply of production and the distribution of goods to market. Moreover, to the extent infrastructure is general, improvements to it that initially benefit a single or limited number of users frequently end up benefiting new economic actors and activities that may not have been foreseen when the improvements were made.[775]

5.83 Canada maintains that, in this dispute, the European Communities has identified no limitation on the use of the roads or port facility at issue by the general public as a result of the Project Olympus Master Site Agreement.[776]

5.84 Canada posits that improvements to private roads would appear to raise different considerations. The European Communities has claimed that "…the Master Site Agreement even includes the possibility of the government funding Boeing's 'private roads.'" However, the European Communities does not appear to allege that any such improvements have been provided to date. Moreover, the European Communities appears to limit its challenge in respect of road improvements to the appropriation of $262.3 million for "the I-5 expansion project" and $28.9 million for the "SR-527 expansion project".[777]

(c) The distinction to be made between the concept of non-general as it pertains to infrastructure, and the concept of specificity as it pertains to subsidies

5.85 Canada notes that to bolster its argument that the infrastructure at issue is other than general, the European Communities claims that Boeing receives a disproportionate and predominant benefit from them. However, the concepts of "disproportionate" or "predominant" benefit or use appear nowhere in Article 1. Rather, these are concepts that are addressed in Article 2 of the SCM Agreement.[778]

5.86 Canada posits that by virtue of Article 1.2 of the SCM Agreement, a subsidy is only subject to the provisions of Part II, or Parts III or V, if the subsidy is specific in accordance with the provisions of Article 2 of the Agreement. Because "subsidy" and "specificity" determinations constitute discrete and sequential findings under the SCM Agreement, it follows that a finding under Article 1.1(a)(1)(iii) that government-provided infrastructure is not general, cannot be equated with a finding under Article 2.1 of the Agreement that a resulting subsidy is specific, as this would introduce an element of redundancy to the analysis.[779]

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[774] Executive Summary of Canada's written submission, para. 13.
[775] Executive Summary of Canada's written submission, para. 14.
[776] Executive Summary of Canada's written submission, para. 15.
[777] Executive Summary of Canada's written submission, para. 16.
[778] Executive Summary of Canada's written submission, para. 17.
[779] Executive Summary of Canada's written submission, para. 18.

5.87 Therefore, Canada considers that the test for de facto specificity in Article 2.1(c) of the SCM Agreement is not the relevant test in an analysis under Article 1.1(a)(1)(iii). It is also not the appropriate test from a systemic perspective because a determination that government-provided infrastructure should be considered other than general, on the basis of certain enterprises deriving a predominant or disproportionate benefit from its usage, would disadvantage those Members whose lack of national or regional economic diversification results in predominant use of government-provided infrastructure by certain enterprises.[780]

(d) Propositions relevant to the analysis of alleged infrastructure subsidies

5.88 Canada argues that, for the foregoing reasons, the Panel should adopt an approach to its analysis of the European Communities' infrastructure claims consistent with, *inter alia*, the following propositions: (i) the general infrastructure exclusion encompasses all government-provided infrastructure that is available for use by the general public; (ii) improvements to general infrastructure, which benefit specific users in a significant or predominant way, do not alter the character of that infrastructure for the purpose of Article 1.1(a)(1)(iii); (iii) the fact that certain enterprises receive a significant or disproportionate benefit from government-provided infrastructure does not establish that such infrastructure is not "general" for the purposes of Article 1.1(a)(1)(iii) of the SCM Agreement.[781]

5.89 Finally, in its oral statement, Canada maintains that the infrastructure challenged by the European Communities in this dispute that is generally available for use by the public. This infrastructure is not a financial contribution under Article 1 because availability for public use is a hallmark of general infrastructure.[782]

5. The ATP Program and Article 2 specificity

5.90 Canada notes that the European Communities alleges that the Advanced Technologies Program of the U.S. Department of Commerce (ATP) is specific within the meaning of Article 2.1(a) of the SCM Agreement. The European Communities bases its claim on the assertion that "(a)ccess to ATP funding is explicitly limited by regulation to only those companies that perform research into "high risk, high pay-off, emerging and enabling technologies". The European Communities' approach to the specificity test would effectively allow a complainant to establish specificity whenever a subsidy programme places conditions on eligibility, no matter how generic those conditions. According to the European Communities approach, specificity can be established even where the eligibility conditions relate to generic skills applicable across multiple sectors of the economy such as a capacity to do research and development.[783]

5.91 Canada contends that there are three major flaws to the European Communities' claim that the ATP Program is specific: First, the universe of companies and industries that potentially fall within the limits identified by the European Communities is highly indeterminate and extraordinarily diverse Second, the European Communities' analysis makes no effort to establish any commonality among the industries or groups of industries that are eligible for ATP funding by reference to the products they produce. Third, the European Communities attempts to establish the specificity of the ATP Program as a whole by reference to an unrepresentative sample of eight particular ATP projects (out of 768 ATP projects created since the program's inception in 1988).[784]

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[780] Executive Summary of Canada's written submission, para. 19.
[781] Executive Summary of Canada's written submission, para. 20.
[782] Executive Summary of Canada's oral statement, para. 31.
[783] Executive Summary of Canada's written submission, para. 21.
[784] Executive Summary of Canada's written submission, para. 22.

BCI deleted, as indicated **[***]**

5.92 Canada argues that asserting that a subsidy programme is specific when the potential universe of users is both diverse and indeterminate is impossible to reconcile with the ordinary meaning of the term "certain enterprises" as used in Article 2.1(a). The chapeau of Article 2.1 clarifies that the term "certain enterprises" refers to "an enterprise or industry or groups of enterprises or industries". The ordinary meaning of the word "certain" is "(d)etermined, fixed, not variable, definite, precise, exact". The European Communities has not attempted to determine at all, much less with precision, how many enterprises and/or industries might be capable of performing research into "high risk, high pay-off, emerging and enabling technologies". Nor has the European Communities identified objective criteria that could be used to establish whether an enterprise comes within this definition.[785]

5.93 Canada considers that conspicuously lacking from the European Communities claim of specificity for ATP funding is any attempt to demonstrate that the enterprises receiving such funding produce similar products. In fact, as the United States notes, ATP projects have supported research in fields as diverse as animal and plant biotechnology, optics and photonics and semiconductors. Divorcing the concept of "an industry" from the products produced by that industry is contrary to practice under the WTO agreements in general, and under the SCM Agreement in particular. For example, in determining the scope of a countervailing duty investigation or the basis for a determination of injury, the nature of the output products is the link used to determine the relevant group of enterprises or industries at issue.[786]

5.94 Canada notes that prior panels have recognized that the concept of industry is tied to the types of product produced. The European Communities interpretation of "industry" or "group of industries" is not supported by the dictionary definition of either the word "industry" or "group". The ordinary meaning of "industry" is "(a) particular form or branch of productive labour; a trade, a manufacture". The ordinary meaning of "group" is "(a) number of people or things regarded as forming a unity or whole on the grounds of some mutual or common relation or purpose, or classed together because of a degree of similarity". "High risk, high pay-off, emerging and enabling technologies" do not form a discrete form or branch of manufacture, nor do they comprise a unity or whole. The industries supported by the ATP Program are engaged in a multiplicity of forms of manufacture.[787]

5.95 In Canada's view, a third flaw in the European Communities' specificity argument is that it relies on supposed commonalities within and among the eight different ATP projects explicitly identified by the European Communities in its first written submission. Putting aside the fact that these eight projects involve very diverse collections of industries, there is no reason to assume that any specificity of these particular projects is representative of the whole programme.[788]

5.96 In its oral statement, Canada contends that the European Communities based its claim that the U.S. Department of Commerce's Advanced Technology Program, or ATP was specific to certain enterprises within the meaning of Article 2.1(a) of the SCM Agreement on the assertion that ATP was explicitly limited by regulation to only those companies that perform research into "high risk, high pay-off emerging and enabling technologies". It also based its claim on the fact that eight particular ATP projects are limited to funding companies involved in manufacturing composite and metal structures, electrical components and improving logistics for manufacturing and supply chains.[789]

5.97 Canada disputes these claims. Its concern with the European Communities' approach is threefold: First, the universe of companies and industries involved in "emerging and enabling technologies" is extraordinarily diverse. Second, there is no commonality among the users of the

[785] Executive Summary of Canada's written submission, para. 23.
[786] Executive Summary of Canada's written submission, para. 24.
[787] Executive Summary of Canada's written submission, para. 25.
[788] Executive Summary of Canada's written submission, para. 26.
[789] Executive Summary of Canada's oral statement, para. 11.

ATP by reference to the products they produce. Third, it is inappropriate to assess the specificity of the ATP as a whole by reference to an unrepresentative sample of eight projects.[790]

5.98 Canada notes that Australia has a somewhat different appreciation of the European Communities' specificity claim in respect of ATP. Australia's submission appears to assume that the European Communities is challenging each of the eight ATP projects at issue as specific under Article 2 regardless of whether the overall ATP is specific. Australia has suggested that the Panel look to the panel report in *Japan – DRAMs* for guidance in assessing the specificity of individual transactions under the ATP.[791]

5.99 Canada observes that Australia may well be correct that the European Communities would like a specificity finding for each of the eight projects at issue regardless of whether ATP is specific. However, Canada is not aware of such a request from the European Communities. If the European Communities meant to make this request, Canada would have expected to see legal arguments in the European Communities' first written submission as to why it was appropriate to do a transaction-level specificity analysis in the case of these ATP projects. Canada would urge the Panel to avoid even considering such an analysis given the absence of an explicit request.[792]

5.100 Canada argues that the specificity analysis is properly conducted at the programme level when the subsidies at issue are provided under a generally available support programme. If subsidies are provided under such programmes in compliance with programme guidelines, they are not specific within the meaning of Article 2.1. Canada notes that the European Communities does not appear to have alleged that the eight ATP projects highlighted in its submission deviated in any way from standard ATP guidelines.[793]

5.101 Canada notes that the panel report in *Japan – DRAMs* was the first and only panel report to have assessed subsidies provided pursuant to a general framework programme at the transaction level rather than at the programme level. In that case, the *Japan – DRAMs* panel acknowledged that, as a general matter, individual transactions that flow from generally available support programmes would not be specific within the meaning of Article 2.1 if they do not deviate from standard programme guidelines. Even if the European Communities had requested a specificity analysis at the individual ATP project level, Canada does not believe such an analysis would be appropriate given Canada's view that specificity should be assessed on a program basis. If, in any event, the Panel is considering such an analysis, Canada does not share Australia's view that the *Japan –DRAMs* panel report provides appropriate guidance.[794]

5.102 Canada further notes that the panel in *Japan - DRAMs* found that an individual transaction would be specific, "if it resulted from a framework programme whose normal operation (1) does not generally result in financial contributions, and (2) does not predetermine the terms on which any resultant financial contributions might be provided, but rather requires (a) conscious decisions as to whether or not to provide the financial contribution (to one applicant or another), and (b) conscious decisions as to how the terms of the financial contribution should be tailored to the needs of the recipient company". In Canada's view, the *Japan – DRAMs* test does not provide appropriate guidance in this dispute for two reasons.[795]

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[790] Executive Summary of Canada's oral statement, para. 12.
[791] Executive Summary of Canada's oral statement, para. 13.
[792] Executive Summary of Canada's oral statement, para. 14.
[793] Executive Summary of Canada's oral statement, para. 15.
[794] Executive Summary of Canada's oral statement, para. 16.
[795] Executive Summary of Canada's oral statement, para. 17.

5.103 First, according to Canada, criterion 1 simply does not apply. Canada notes that neither the European Communities nor the United States has claimed that ATP "does not generally result in financial contributions". Quite the contrary. Second, the *Japan – DRAMs* panel seems to have assumed, in criterion two, that a generally available support programme can only be considered non-specific if the support it provides is granted automatically and without conscious decisions. This "no conscious decision" approach sets the bar too high to serve as a model for this or any other panel.[796]

5.104 In Canada's view, Article 2 of the SCM Agreement is intended to provide Members with real guidance as to what types of subsidy are or are not actionable under the SCM Agreement. It is rare for a government to establish a general support programme that provides subsidies without any conscious decisions at all. A careful reading of Article 2 does not support the *Japan – DRAMs* panel's apparent view that the granting of a subsidy must be automatic, without conscious decisions, to qualify as non-specific. Article 2.1(b) provides that specificity shall not exist for subsidies where eligibility is automatic based on objective criteria. Critically, however, Article 2.1(b) refers only to automatic eligibility. The actual granting of support need not be automatic and unconscious.[797]

5.105 Canada contends that to claim otherwise would be to ignore Article 2.1(c), which presupposes some element of discretion in the granting of Article 2.1(b) subsidies. Article 2.1(c) sets out the de facto specificity test. It provides that programs that qualify as non-specific under Article 2.1(b) may nonetheless be found de facto specific if discretion has been exercised inappropriately by the granting authority in the decision to grant a subsidy. Since the exercise of some discretion is assumed, it follows that not every exercise of discretion is disqualifying.[798]

5.106 According to Canada, it is not necessary to find that the granting of a subsidy is automatic or unconscious to qualify a programme as non-specific under Article 2. It is only necessary that the exercise of discretion not undermine a programme's objective criteria governing eligibility for, and the amount of, a subsidy. Because the *Japan – DRAMs* panel overstated the relevant standard in its proposed test, it does not provide helpful guidance in this dispute.[799]

5.107 As a final comment on ATP, Canada does not agree with Australia that the Panel should assess ATP using the de facto specificity criteria in Article 2.1(c). The European Communities framed their specificity claim in respect to ATP under Article 2.1(a) alone.[800]

6. De facto export contingency

5.108 Canada notes that the European Communities alleges that certain tax incentives provided to Boeing by Washington State are prohibited under Article 3 of the SCM Agreement because Washington State, in fact, tied the tax incentives to actual or anticipated export performance within the meaning of Article 3.1(a) of the SCM Agreement. However, the European Communities claims in respect of these tax incentives fail to satisfy the test for de facto export contingency provided for in the SCM Agreement.[801]

5.109 Canada points out that the Appellate Body has found that this standard requires that "the facts must 'demonstrate' that the granting of a subsidy is tied to or contingent upon actual or anticipated exports. It does not suffice to demonstrate solely that a government granting a subsidy anticipated that exports would result". The Appellate Body has also explained that export orientation may be

[796] Executive Summary of Canada's oral statement, para. 18.
[797] Executive Summary of Canada's oral statement, para. 19.
[798] Executive Summary of Canada's oral statement, para. 20.
[799] Executive Summary of Canada's oral statement, para. 21.
[800] Executive Summary of Canada's oral statement, para. 22.
[801] Executive Summary of Canada's written submission, para. 27.

taken into account as a relevant fact, depending on the facts of a particular case, but export orientation, on its own, cannot support the conclusion that a subsidy is export contingent.[802]

5.110 Canada considers that the European Communities' argument that HB 2294 tax incentives are contingent on export performance is based on the fact that its entry into effect was contingent on an agreement by Boeing to site a final assembly facility in Washington State. Such a facility is defined in HB 2294 as "a location with the capacity to produce at least thirty-six super-efficient airplanes per year". According to the European Communities, such a capacity, if fully utilized, would produce more 787 airplanes than could be absorbed by the U.S. market in an average year.[803]

5.111 Canada argues that this claim, even accepted at face value, falls well short of establishing an export contingency. Washington State's requirement was that Boeing site a facility in Washington State with a minimum production capacity in order to receive the tax incentives. It did not require Boeing to make a single export sale or sell more than it otherwise would have in export markets, nor did it distort Boeing's market orientation in favour of exports. A more compelling explanation for the contingency in HB 2294 is that Washington State wanted to retain aerospace manufacturing and was not willing to accept a mere token facility in return for its tax incentives.[804]

7. Serious prejudice

5.112 Canada notes that, in their responses to the Panel question on the issue of whether Article 6.3 of the SCM Agreement sets out an exhaustive list of the possible forms of serious prejudice that may be challenged under Article 5(c), the third parties take divergent positions. Australia and Korea take the position that Article 6.3 is an exhaustive list. Japan takes the position that a successful serious prejudice claim requires the demonstration of an effect under Article 6.3, but stops short of declaring that Article 6.3 is exhaustive. Brazil and China take no position on the issue. Canada takes the position, consistent with the views expressed by the panel in *Korea – Commercial Vessels*, that Article 6.3 does not set out an exhaustive list.[805]

5.113 According to Canada, this divergence of views is not surprising since the relevant provisions appear to pull in different directions. Footnote 13 to Article 5(c) clarifies that the term "serious prejudice" is used in the SCM Agreement in the same sense as it is used in Article XVI of GATT 1994 and includes threat of serious prejudice. Article 5(c) brings into the SCM Agreement a broad understanding of serious prejudice forged over decades of GATT practice. Article 6.2, on the other hand, establishes that serious prejudice cannot be established if none of the effects listed in Article 6.3 exist. This suggests that Article 6.3 is an exhaustive list of the forms of serious prejudice. The language of Article 6.3 itself is open-ended, and refers the reader back to Article 5(c).[806]

5.114 However, as discussed in Canada's written response to the Panel on this subject, there is a way to interpret these provisions harmoniously. Article 5(c) imports into the SCM Agreement an unbroken chain of meaning for the term "serious prejudice", encompassing the concepts set out in Article 6.3, but also recognizing the possibility of additional forms of serious prejudice closely linked to those core concepts. Article 6.2 serves to indicate that Article 6.3 is a gatekeeper provision in that serious prejudice cannot be established if none of the core concepts in Article 6.3 are present. Article 6.3 itself is drafted broadly enough to permit the possibility of un-enumerated forms of serious prejudice, while providing particular guidance on the core concepts that must be established to found

[802] Executive Summary of Canada's written submission, para. 28.
[803] Executive Summary of Canada's written submission, para. 29.
[804] Executive Summary of Canada's written submission, para. 30. See also, Executive Summary of Canada's oral statement, para. 31.
[805] Executive Summary of Canada's oral statement, para. 23.
[806] Executive Summary of Canada's oral statement, para. 24.

a serious prejudice claim. Treating Article 6.3 as the gatekeeper provision provides a mechanism for giving Article 6.3 its due weight without denying the legacy of 60 years of GATT/WTO practice that has adopted a broad understanding of the serious prejudice concept.[807]

5.115 Canada is sympathetic to the concern raised by Australia that the possibility of undefined forms of serious prejudice could be seen as leaving a panel with no guidance for its examination of such a complaint. However, in Canada's view, such guidance is available in the jurisprudence of the GATT. This jurisprudence suggests that forms of serious prejudice that are not enumerated in Article 6.3 must have a real and substantial link to the core concepts that are set out in Article 6.3.[808]

5.116 In Canada's view, there is a practical reason why Article 6.3 may have been structured as a gatekeeper provision for the serious prejudice concept, while permitting a panel to consider the possibility of other forms of serious prejudice once one of the effects in Article 6.3 is established. WTO dispute settlement is a limited resource. There is a logic to requiring a specific threshold before a Member can access the dispute settlement system to make a claim of serious prejudice. However, once a Member has reached that threshold, the benefits of an effective resolution of the dispute between the Parties may justify giving a panel some latitude to acknowledge other forms of serious prejudice that go beyond the confines of Article 6.3.[809]

5.117 Canada considers that this type of gatekeeper structure is not unique in the WTO Agreements. An analogy can be made to Article 17.4 in the AD Agreement that requires a complainant to delay its recourse to dispute settlement in respect to an anti-dumping investigation until an administering authority has taken one of three types of measures: a provisional measure of significant impact, a final action to levy definitive anti-dumping duties or acceptance of price undertakings.[810]

5.118 Canada recalls that the Appellate Body in *Guatemala – Cement I* found that Article 17.4 of the AD Agreement meant that a panel request in respect of an anti-dumping investigation must specifically identify one of the required types of measures in order to give a panel jurisdiction over a dispute. However, as the Appellate Body clarified in *US – 1916 Act*, once a Member has identified one of the three types of gatekeeper measures in its panel request, it may challenge the consistency of any preceding action taken by an investigating authority in the course of an anti-dumping investigation.[811]

5.119 Canada posits that a gatekeeper interpretation of Article 6.3 in the SCM Agreement is justifiable for the same reasons that the Appellate Body gave for justifying the structure of Article 17.4 of the SCM Agreement in *US – 1916 Act*. It avoids excessive use of dispute settlement, while seeking to provide a full and effective resolution to those disputes that do require formal dispute settlement.[812]

D. CHINA

1. Introduction

5.120 Recognizing at the outset that many of the issues raised in this dispute are solely or primarily factual, China focuses on the discussion of the following three legal issues in its third-party submission:

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[807] Executive Summary of Canada's oral statement, para. 25.
[808] Executive Summary of Canada's oral statement, para. 26.
[809] Executive Summary of Canada's oral statement, para. 27.
[810] Executive Summary of Canada's oral statement, para. 28.
[811] Executive Summary of Canada's oral statement, para. 29.
[812] Executive Summary of Canada's oral statement, para. 30.

(a) The use of best information available and the drawing of adverse inferences;

(b) The finding of de facto specificity; and

(c) The finding of threat of serious prejudice.[813]

2. Best information available and adverse inference

5.121 China notes that Annex V of the SCM Agreement provides for a set of special rules for the development of information on serious prejudice. Such rules are only expressly applicable where an Annex V procedure has been initiated. Based on the language of Annex V, there appear to be two landmarks that indicate the existence of an Annex V procedure: whether the DSB has initiated an Annex V procedure and whether a "representative" ("Annex V Facilitator") has been designated.[814] Having addressed the threshold issue of whether Annex V is applicable to this dispute, China wishes to discuss two aspects of the Annex V rules that are conceivably relevant to the parties' arguments in this dispute.[815]

(a) Best information available

5.122 China points out that paragraph 6 of Annex V authorizes the complaining party to make its case based on evidence available to it and the panel to rely on "best information otherwise available" in certain cases. However, this provision does not deprive the defending party of the right to submit other information, including rebuttal information, in the later part of the panel proceedings following the Annex V procedure.[816]

5.123 First, China notes that the wording of paragraph 5 of Annex V does not prevent the submission of information by either party after an Annex V procedure. For example, paragraph 5 provides that the information obtained during the process "should" include rebuttal evidence. The word "should" is often used to imply an exhortation or a preference. This seems to be true especially taking into account that the word "shall" is used in other parts of paragraph 5.[817] According to China, the last sentence of para. 5 further envisages the collection of supplemental information by the panel "in the course of reaching its conclusions". This as well indicates that the Annex V procedure is not the end to the information-collecting process.[818]

5.124 Second, China notes that although the last sentence of paragraph 9 provides that "ordinarily the panel should not request additional information to complete the record where the information would support a particular party's position and the absence of that formation in the record is the result of unreasonable non-cooperation by that party in the information-gathering process", it does not prevent a party from submitting further factual information during the panel process. Furthermore, China argues that the words "ordinarily" and "should" imply that there is a possibility for a panel to seek information even though the lack of such information is the result of the unreasonable non-cooperation of a party.[819]

5.125 Third, China considers that it is important to note that during the Annex V procedure the defending party is not in a good position to fully understand how a complaining party will structure its claim and substantiate it with factual and legal arguments. This situation greatly limits a defending

[813] Executive Summary of China's written submission, para. 1.
[814] Executive Summary of China's written submission, para. 2.
[815] Executive Summary of China's written submission, para. 3.
[816] Executive Summary of China's written submission, para. 4.
[817] Executive Summary of China's written submission, para. 5.
[818] Executive Summary of China's written submission, para. 6.
[819] Executive Summary of China's written submission, para. 7.

party's ability to submit pertinent rebuttal information. Depriving a defending party of the rights to submit rebuttal evidence during the substantive stages of the panel proceedings would seriously prejudice its rights to argue its case with factual support and would thus unfairly prejudice its right to due process.[820]

5.126 In summary, China believes that the reference to "best information otherwise available" in paragraph 6 of Annex V of the SCM Agreement should not be interpreted to prevent a non-cooperating party in the Annex V procedure from submitting further factual information at the later stage of the panel proceedings.[821]

(b) Adverse inference

5.127 With respect to drawing adverse inferences, China submits that a panel is not required to draw adverse inferences in any cases of non-cooperation. Rather, it should take into account the relevant facts and policy considerations when making a decision to do so.[822]

5.128 First, China notes that paragraph 8 of Annex V provides that a panel shall consider the advice of the Annex V Facilitator on certain aspects. In China's view, this does not require a panel to make its decision on the sole basis of the Annex V Facilitator's advice. Rather, Article 11 of the DSU mandates a panel with the responsibilities to "make an objective assessment of the matter before it". Therefore, a panel is obligated to make an objective assessment of the facts on its own in order to decide whether to draw adverse inferences, and if so, what adverse inferences to be drawn.[823]

5.129 Second, in China's view, when a panel is invoking its discretion under paragraph 7 of Annex V, it is also bound by the principles set forth in Article 13 of the DSU and the WTO jurisprudence with respect to adverse inferences.[824]

5.130 China recalls that in *Canada – Aircraft*, the Appellate Body opined that "authority (to draw adverse inferences) seems to us an ordinary aspect of the task of all panels to determine the relevant facts of any dispute involving any covered agreement (emphasis added)".[825] Given this conclusion, China believes that the guidance given by the Appellate Body in respect of drawing adverse inferences in cases other than those involving Annex V procedures should also be followed when a panel is under the Annex V procedures to determine whether and what inferences should be drawn.[826]

5.131 China also points out that the Appellate Body in *Canada – Aircraft*, emphasized that a panel "should examine very closely indeed whether the full ensemble of the facts on the record reasonably permits the inference urged by one of the parties to be drawn".[827] In a subsequent dispute, *US - Wheat Gluten*, the Appellate Body re-confirmed its position that adverse inferences must be drawn on the basis of all of the facts of record relevant to the particular determination to be made and it is not

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[820] Executive Summary of China's written submission, para. 8.
[821] Executive Summary of China's written submission, para. 9.
[822] Executive Summary of China's written submission, para. 10.
[823] Executive Summary of China's written submission, para. 11.
[824] Executive Summary of China's written submission, para. 12.
[825] Executive Summary of China's written submission, footnote 1 referring to Appellate Body Report, *Canada – Aircraft*, para. 202.
[826] Executive Summary of China's written submission, para. 13.
[827] Executive Summary of China's written submission, footnote 2 referring to Appellate Body Report, *Canada – Aircraft*, para. 204.

permissible for a panel to draw adverse inferences simply because a party refuses to provide certain information requested from it by the panel.[828]

5.132 Third, China submits that the drawing of adverse inferences should not be used as a punishment of a party's non-cooperation. In *Canada – Aircraft*, the Appellate Body noted that the "'adverse inferences' that Brazil believes the Panel should have drawn is not appropriately regarded as a punitive inference in the sense of a 'punishment' or 'penalty' for Canada's withholding of information. It is merely an inference which in certain circumstances could be logically or reasonably derived by a panel from the facts before it".[829] This shows the drawing of adverse inferences should not be made as a "punishment" of a party's withholding of information.[830]

5.133 On the basis of the above, China submits that Annex V does not require or even authorize a panel to draw adverse inferences in any case of non-cooperation by a party in the Annex V procedure. Rather, the drawing of adverse inferences should be based on all the relevant facts of record and should not be used as a punishment to the non-cooperating party.[831]

3. A three-prong analysis in the determination of de facto specificity

5.134 China believes that Article 2.1(c) of the SCM Agreement provides for a three-prong analysis in the determination of de facto specificity.[832]

5.135 First, China considers that there should be facts indicating the possible existence of de facto specificity. In practice, only when *de jure* specificity cannot be established on sufficient evidential grounds will one turn to analyze whether de facto specificity exists. Under such circumstances, Article 2.1(c) requires "reasons to believe". However, such reasons need only be indicative of the possibility of de facto specificity. The first "may" in the first sentence of Article 2.1(c) also indicates that the standard for the reasons is not very high.[833]

5.136 Second, China argues that consideration may then be turned to any or all of the four factual factors identified in the second sentence of Article 2.1(c). As the panel in *US – Softwood Lumber IV* ruled, the second "may" in the paragraph indicates that an authority may want to look at any of the four factors.[834] In the multilateral context, the burden is on the complaining member to substantiate its claim of de facto specificity with positive evidence supporting the finding of any of these factual factors.[835]

5.137 Third, China argues that the last sentence of Article 2.1 (c) requires that, when assessing any or all of the four factual factors, one shall take into account two circumstantial factors, i.e. the extent of diversification of economic activities and the length of time of the application of the subsidy program. Thus, in the context of a multilateral challenge against a WTO Member's subsidy programme, a complaining Member should demonstrate that based on the consideration of these two

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[828] Executive Summary of China's written submission, footnote 3 referring to Appellate Body Report, *US – Wheat Gluten Safeguard*, para. 174. Executive Summary of China's written submission, para. 14.

[829] Executive Summary of China's written submission, footnote 4 referring to Appellate Body Report, *Canada – Aircraft*, para. 200.

[830] Executive Summary of China's written submission, para. 15.

[831] Executive Summary of China's written submission, para. 16.

[832] Executive Summary of China's written submission, para. 17.

[833] Executive Summary of China's written submission, para. 18.

[834] Executive Summary of China's written submission, footnote 5 referring to Panel, *US – Lumber CVD Final*, WT/DS257/R, para. 7.123.

[835] Executive Summary of China's written submission, para. 19.

circumstantial factors, any or all of the four factual factors support a positive finding of de facto specificity.[836]

5.138 In short, China submits that in assessing whether the facts surrounding a subsidy program supports the finding of de facto specificity, the three-prong analysis provided in Article 2.1(c) should be followed.[837]

4. Threat of serious prejudice

5.139 In China's view, footnote 13 to Article 5 of the SCM Agreement makes it clear that "serious prejudice" includes "threat of serious prejudice". Thus, threat of serious prejudice may be an independent condition that leads to the application of remedies under Article 7 of the SCM Agreement. It is therefore important to consider how threat of serious prejudice could be established.[838]

5.140 China notes that Article 6 of the SCM Agreement only has detailed provisions on the establishment of serious prejudice and gives no guidance on the finding of threat of serious prejudice. However, in China's view, given the structure of Article 5 and the general framework of the SCM Agreement, Articles 15.7 and 15.8 of the SCM Agreement on the determination of threat of injury should provide important guidance of finding threat of serious prejudice in the multilateral context.[839]

5.141 First, China observes that as the thrust of finding threat of serious prejudice, the threat must be "clearly foreseen and imminent" as provided in pertinent part of Article 15.7. In *Mexico – Corn Syrup (Article 21.5 – US)*, when discussing the parallel provision of Article 3.7 of the AD Agreement, the Appellate Body notes that "a 'proper establishment' of facts in a determination of threat of material injury must be based on events that, although they have not yet occurred, must be 'clearly foreseen and imminent', in accordance with Article 3.7 of the Anti-Dumping Agreement".[840]

5.142 Second, China is of the view that depending on the threat of specific types of serious prejudices at issue, one needs to look at relevant factual factors to establish the existence of the threat.[841]

5.143 China recognizes that the concepts of "material injury" and "serious prejudice" are distinct from each other, and that the factors as enumerated in Article 15.7 may not be fully applicable to the finding of threat of serious prejudice. However, in China's view, some of the factors listed in Article 15.7 might be neutral, and thus common, in the consideration of threat of injury and that of serious prejudice. For example, "nature of the subsidy or subsidies in question and the trade effects likely to arise therefrom" is one of such factors.[842]

5.144 Third, China notes that Article 15.7 requires that "(a) determination of a threat of material injury shall be based on facts and not merely on allegation, conjecture or remote possibility". If a complaining party chooses to pursue a threat of serious prejudice case, it must establish a prima facie

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[836] Executive Summary of China's written submission, para. 20.
[837] Executive Summary of China's written submission, para. 21.
[838] Executive Summary of China's written submission, para. 22.
[839] Executive Summary of China's written submission, para. 23.
[840] Executive Summary of China's written submission, footnote 6 referring to Appellate Body Report, *Mexico – Corn Syrup (Article 21.5 – US)*, para. 85. Executive Summary of China's written submission, para. 24.
[841] Executive Summary of China's written submission, para. 25.
[842] Executive Summary of China's written submission, para. 26.

case of such threat on the basis of facts supported by evidence, rather than mere allegation, conjecture or remote possibility.[843]

5.145 Fourth, as Article 15.8 provides that "special care" should be taken in the consideration of threat of injury, China believes the same logic underlying that provision remains valid in a dispute under the multilateral framework. As noted above, a finding of threat of serious prejudice alone can lead to application of remedies under Article 7. Thus, when the effects of the subsidy have not yet materialized, a panel should be cautious in assessing whether such threat does exist and is clearly foreseen and imminent.[844]

5.146 In summary, China submits that the threat of serious prejudice must be clearly foreseen and imminent and the finding of such threat must be based on facts and made with special care.[845]

5. Conclusion

5.147 In conclusion, China is of the opinion that:

(a) the reference to "best information otherwise available" in Annex V of the SCM Agreement should not be interpreted to prevent the non-cooperating party in the Annex V procedure from submitting further factual information at the later stage of the panel proceedings; China further submits that paragraph 7 of Annex V does not require or even authorize a panel to draw adverse inferences in any case of non-cooperation by a party in the Annex V procedure; the drawing of adverse inferences should be based on all the relevant facts of record and should not be used as a punishment on the non-cooperating party.

(b) to determine the de facto specificity, a three-prong analysis shall apply: (i) there should be facts indicating the possible existence of de facto specificity; (ii) any or all of the four factors listed in Article 2.1(c) of the SCM Agreement shall be demonstrated; and (iii) two circumstantial factors shall be considered.

(c) the threat of serious prejudice must be clearly foreseen and imminent and the finding of such threat must be based on facts and made with special care.[846]

E. JAPAN

1. An examination of specificity as a matter of law must be based on the entire legal framework under which the alleged subsidy is conferred

5.148 Japan first argues that a cornerstone of the SCM Agreement, laid out in Article 1.2, is the threshold that subsidies are subject to Part III only if they are specific. Article 2, in turn, provides principles for determining whether a subsidy is "specific to an enterprise or industry or group of enterprises or industries…" As a general matter, Article 2.1, in subparagraphs (a) and (b), provides principles for determining where a subsidy is specific as a matter of law, or *de jure* specific. Subparagraph (c) sets forth additional criteria for determining the existence of specificity as a matter of fact, or de facto specificity.[847]

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[843] Executive Summary of China's written submission, para. 27.
[844] Executive Summary of China's written submission, para. 28.
[845] Executive Summary of China's written submission, para. 29.
[846] Executive Summary of China's written submission, para. 30.
[847] Executive Summary of Japan's written submission, para. 1.

5.149 Japan comments on the application to this dispute of the principles for determining *de jure* specificity with respect to the Parties' arguments concerning the right of NASA contractors to retain patent rights arising from their work as U.S. government contractors. Japan notes that the European Communities claims that the legal regime providing for the retention of these patent rights is *de jure* specific because it is established under the National Aeronautics and Space Act of 1958 ("Space Act"), and so is expressly limited to the aeronautics and space-related industries.[848] The United States responds that the regulations implementing the Space Act are tied to government-wide policies as established in a Presidential Memorandum and an Executive Order.[849] Further, the United States maintains that all contractors under U.S. government R&D contracts have the same patent retention rights.[850] In essence, the United States maintains that the alleged subsidy is not *de jure* specific when examined in the light of the overall legal framework governing contractor retention of patent rights.[851] Japan agrees that the Panel's specificity analysis should be based on the overall legal framework governing the alleged subsidy.[852]

5.150 Japan argues that in determining whether "the legislation…explicitly limits access to a subsidy to certain enterprises", or whether "the legislation…establishes objective criteria or conditions governing the eligibility for, and the amount of, a subsidy", for the purpose of Articles 2.1(a) and (b) of the SCM Agreement, a panel must first engage in a detailed examination of the domestic legislation at issue. In doing so, Japan believes this Panel should examine the relevant legal regime as a whole, and not merely a small or isolated portion of that regime. In other words, if a proper examination of the legal regime requires – under a Member's particular domestic legal framework – the consideration of several legal instruments, a panel must take into account all of these instruments, and not focus on one in isolation of the others. Japan further notes that the Appellate Body has indicated that "it is permissible, indeed essential, to conduct a detailed examination of {pertinent} legislation in assessing its consistency with WTO law".[853] Japan submits that this approach applies equally where a panel is assessing whether a subsidy measure is *de jure* specific for purposes of Articles 2.1(a) and (b).[854]

2. Comments on certain elements of the analysis the Panel should undertake in assessing whether the alleged U.S. subsidies cause serious prejudice

(a) The Panel should ensure that the reference period is sufficient to permit the required objective assessment of the matter before it

5.151 First, Japan makes a brief comment on the appropriate period for an analysis of alleged adverse effects through the types of serious prejudice described in Article 6.3 of the SCM Agreement. Japan observes that the United States takes the position that "a panel considering claims of serious

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[848] European Communities' first written submission, , para. 852. Executive Summary of Japan's written submission, footnote 1.

[849] United States' first written submission, para. 335. Executive Summary of Japan's written submission, footnote 2.

[850] United States' first written submission, para. 335. Executive Summary of Japan's written submission, footnote 3.

[851] Japan notes that the United States made a similar argument in the *United States –Offset Act (Byrd Amendment)*, contending that the specificity analysis must be carried out for the challenged subsidy program "as a whole." Panel Report, para. 7.112. The panel agreed that the CDSOA, rather than individual subsidy payments under that legislation (as argued by Mexico), should be examined in determining specificity. Executive Summary of Japan's written submission, footnote 4.

[852] Executive Summary of Japan's written submission, para. 2.

[853] Appellate Body Report, *US – Hot-Rolled Steel*, para. 200. See also, Appellate Body Report, *India – Patent (US)*, paras. 65-68 (discussing the requirement to examine "relevant aspects" of a Member's domestics laws in order to assess conformity thereof with that Member's WTO obligations). Executive Summary of Japan's written submission, footnote 5.

[854] Executive Summary of Japan's written submission, para. 3.

prejudice under Article 6.3 must examine the markets referenced in that article over a period of time sufficient to permit an objective assessment of the 'matter before it'".[855] Japan agrees with this position.[856] Japan notes that nothing in the SCM Agreement or the DSU establishes a fixed timeframe for a panel's reference period in examining evidence of alleged adverse effects, provided that the evidence relates to subsidy measures within the panel's terms of reference. Further, Article 11 of the DSU requires that a panel "make an objective assessment of the matter before it, including an objective assessment of the facts of the case and the applicability of and conformity with the relevant covered agreements". Thus, depending on the facts before it, a panel must determine the appropriate reference period to examine, and it must choose a period that will allow it to render the required "objective assessment", so as to accomplish the task imposed on a panel pursuant to DSU Article 11.[857]

5.152 In addition, Japan notes that selection of the appropriate reference period may also, depending on the facts of a particular case, be relevant to the required analysis of whether adverse effects through serious prejudice are caused by the subsidies at issue. For example, the reference period should be sufficient to ensure that a panel can examine whether "the effects of other factors…are not improperly attributed to the challenged subsidies".[858] Japan addresses issues related to the required causation test under Articles 5 and 6 below.[859]

5.153 On a separate but related issue, Japan believes that the Panel should also be able to consider evidence that pre-dates or post-dates its establishment, as well as evidence that falls outside of the determined reference period. In *EC – Selected Customs Matters*, the Appellate Body clarified that, while there are temporal limitations on the measures that a panel may consider, "such limitations do not apply in the same way to evidence", and that "{a} panel is not precluded from assessing a piece of evidence for the mere reason that it pre-dates or post-dates its establishment".[860] The same logic should be applied by the Panel in this dispute to evaluate evidence concerning the alleged adverse effects of the challenged subsidy measures. In particular, Japan believes that the Panel should consider all relevant evidence provided, regardless whether that evidence pre-dates or post-dates the Panel's establishment.[861]

(b) The Panel should evaluate whether the claimed serious prejudice results from the subsidies at issue

5.154 Japan provides its views with respect to certain aspects of the causation analysis that the Panel is called upon to perform in assessing claims of adverse effects through serious prejudice under Article 6.3.[862] First, Japan emphasizes that the requirement to determine whether the alleged adverse effects result from the subsidies at issue is clear from the text of the SCM Agreement itself. It appears

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[855] United States' first written submission, para. 803. Executive Summary of Japan's written submission, footnote 6.

[856] Executive Summary of Japan's written submission, para. 4.

[857] Executive Summary of Japan's written submission, para. 5.

[858] Appellate Body Report, *US – Upland Cotton*, para. 437. Executive Summary of Japan's written submission, footnote 7.

[859] Executive Summary of Japan's written submission, para. 6.

[860] Appellate Body Report, *EC – Selected Customs Matters*, para. 188. In *US – Upland Cotton*, the United States agreed that the panel could look at post-establishment evidence. Panel Report, *US – Upland Cotton*, para. 7.192 and n.254. See also, Panel report, *EC – Trademarks and Geographical Indications (US)*, para. 7.20. Executive Summary of Japan's written submission, footnote 8.

[861] Executive Summary of Japan's written submission, para. 7. Japan notes that post-panel establishment evidence relevant to the evaluation of claimed adverse effects may be particularly probative in this case, given the rapidly evolving conditions of competition for the U.S. and EC LCA industries. Executive Summary of Japan's written submission, footnote 9.

[862] Executive Summary of Japan's written submission, para. 8.

that both the European Communities and the United States agree with this proposition.[863] To begin with, Article 5 provides that "{n}o Member should cause, through the use of any subsidy referred to in paragraphs 1 and 2 of Article 1, adverse effects to the interests of other Members". Serious prejudice as defined by Article 6.3 is, of course, one of the types of adverse effects specified in Article 5, which no Member should cause. Thus, under the plain language of the SCM Agreement, serious prejudice caused by factors other than a subsidy is not actionable under Part III.[864]

5.155 Further, Japan considers that the requirement for a causation test with respect to alleged serious prejudice is embedded in the structure of Article 6.3. Article 6.3 describes four types of serious prejudice. With respect to each, serious prejudice is characterized as "the effect of the subsidy". In other words, Article 6.3 requires an analysis of whether the alleged serious prejudice is the effect of (i.e. caused by) the subsidy or not.[865]

5.156 Japan notes that panels have described the required causation analysis as a counter-factual "but for" test.[866] Further, in conducting such a "but for" analysis, panels have also stressed the importance of proper attribution, i.e. "the need to take into account the effects of identified factors other than the subsidies, to determine whether such factors would attenuate any affirmative causal link that one may find, or render insignificant any price suppression or price depression effect of the subsidy that one may find".[867] Japan submits that these standards should apply equally in this case, taking into account the obligation to properly attribute effects to their respective causes as stated by the panel.[868]

5.157 Concerning the role of the nature of the subsidy in the required causation analysis, Japan wishes to comment on the European Communities' argument that the Washington State Business and Occupation ("B&O") tax rate reduction, as applied to the new Boeing 787 programme (along with other alleged subsidies), operates to reduce marginal unit costs for the subsidized products, thus enabling Boeing to lower its sales prices for those products by the amount of the subsidy.[869] Japan refrains from commenting on the specific facts with respect to this issue. However, Japan particularly notes that in a segmented causation analysis, which the United States agrees to employ in this dispute, the adverse effect on a "like product" which falls under the category of a certain product market

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[863] European Communities' first written submission, para. 1058; United States' first written submission, para. 725. Executive Summary of Japan's written submission, footnote 10.

[864] Executive Summary of Japan's written submission, para. 9.

[865] Executive Summary of Japan's written submission, para.10. The Appellate Body in *US – Upland Cotton* confirmed this point. Appellate Body Report, *US – Upland Cotton*, para. 437. In that case, while the Appellate Body upheld the panel's causation analysis under Article 6, it also explained that the panel should have done more to "demonstrate precisely how it evaluated the different factors bearing on the relationship between the price-contingent subsidies and significant price suppression." *Ibid.*, para. 458. The Appellate Body further explained that, while the causation analysis required under Part V of the SCM Agreement should not be "automatically transposed into Part III of the SCM Agreement", that type of analysis, along with the causation tests set forth in the Agreement on Safeguards and the AD Agreement – might "suggest ways of assessing whether the effect of a subsidy is significant price suppression rather than it being the effect of other factors." *Ibid*,. para. 438. Executive Summary of Japan's written submission, footnote 11.

[866] For example, in the words of the *Korea – Commercial Vessels* panel, addressing claims of price suppression under Article 6.3(c), "the analysis that seems to be called for by the Agreement (by virtue of the concepts of prices suppression and depression themselves), concerns what the price movements for the relevant {goods} *would have been* in the absence of (i.e., 'but for') the subsidies at issue." Panel Report, *Korea – Commercial Vessels*, para. 7.537. Executive Summary of Japan's written submission, footnote 12.

[867] Panel Report, *Korea – Commercial Vessels*, para. 7.618. See also, Panel Report, *US – Upland Cotton*, para. 7.1344. Executive Summary of Japan's written submission, footnote 13.

[868] Executive Summary of Japan's written submission, para. 11.

[869] European Communities' first written submission, paras. 1233-34. Executive Summary of Japan's written submission, footnote 14.

should be attributed to the subsidy provided for a corresponding "subsidized product" and not to another "subsidized product" which falls under a different category of product market.[870]

5.158 Japan also notes with interest the U.S. argument that the Washington State B&O tax rate reduction, as applied to the new Boeing 787 programme, will not generate any fiscal effects until the first aircraft is delivered in 2008. Japan supports the United States in that any finding of revenue foregone (whether foregone in the past, present, or future) must be accompanied by an analysis of adverse effects flowing from any such measure, to be conducted separately for a pertinent subsidy measure under Articles 5 and 6 of the SCM Agreement. Such an analysis would have to be performed based on the facts of each case, and pursuant to the causation tests referred to above.[871]

(c) The terms "imports" and "exports" for purposes of Article 6.3 require appropriate special consideration in the light of the nature of the LCA industry

5.159 Japan also would like to comment on how the Panel should properly assess the European Communities' claims of serious prejudice with regard to the meaning of the terms "imports" and "exports" in Article 6.3. Article 6.3(a) provides that serious prejudice may arise where "the effect of the subsidy is to displace or impede the imports of a like product of another Member into the market of the subsidizing Member". Article 6.3(b) provides that serious prejudice may also arise where "the effect of the subsidy is to displace or impede the exports of a like product of another Member from a third country market". The terms "imports" and "exports" as used here are nowhere defined in the SCM Agreement.[872]

5.160 Japan notes that in discussing the meaning of the terms "imports" and "exports", the European Communities relies on dictionary definitions that reference the physical movement of goods across borders.[873] The European Communities also contends, however, that in the context of Article 6.3, these terms may be read as encompassing current orders that will result in future imports or exports.[874] The United States, by contrast, argues that the ordinary meaning of these terms does not extend beyond the physical movement of goods across borders, or in this context, actual LCA deliveries.[875] The United States further contends that the broader context of Article 6.3 – i.e. Articles 6.3(c) and (d) – shows that the drafters of the SCM Agreement knew how to specify distinct stages in a commercial transaction; thus, "imports" and "exports" as used in paragraphs (a) and (b) of Article 6.3 should not be afforded the expansive reading urged by the European Communities.[876] In Japan's view, the correct interpretation lies in between the opposing views espoused by the Parties.[877]

5.161 Japan respectfully cautions against any wholesale conclusion that orders that may lead to future deliveries are necessarily within the meaning of "imports" and "exports" for purposes of Article 6.3. In Japan's view, it is important to take into account the nature of the industry at issue. Where, as in this dispute, the industry involves capital goods for which significant periods of time typically elapse between the dates of order and delivery, it is not considered reasonable to interpret the

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[870] Executive Summary of Japan's written submission, para. 12.
[871] Executive Summary of Japan's written submission, para. 13.
[872] Executive Summary of Japan's written submission, para. 14.
[873] European Communities' first written submission, paras. 1121-22 (citing definitions provided in *The New Shorter Oxford English Dictionary* (4th ed. 1993)). Executive Summary of Japan's written submission, footnote 15.
[874] European Communities' first written submission, para. 1123. Executive Summary of Japan's written submission, footnote 16.
[875] United States' first written submission, para. 903. Executive Summary of Japan's written submission, footnote 17.
[876] United States' first written submission, para. 904. Executive Summary of Japan's written submission, footnote 18.
[877] Executive Summary of Japan's written submission, para. 15.

terms "imports" and "exports" as encompassing orders; because orders are often cancelled, the terms of orders are subject to change prior to delivery, delivery dates are often postponed for extended periods, or other factors break the link between order and delivery. In this respect, Japan agrees with the U.S. position that imports and exports refer to actual deliveries than orders for the purpose of Articles 6.3 (a) and (b) at least in this dispute.[878]

F. KOREA

1. In order to make a prima facie case, a Member claiming existence of an actionable subsidy must "demonstrate" that all the elements provided in the SCM Agreement exist

5.162 In Korea's view, satisfying prima facie standard is to present factual evidence and legal arguments "sufficient to demonstrate" the inconsistency of the challenged action with the defending Member's obligation. By nature, the evidentiary requirement is highly case-specific. How much and precisely what kind of evidence is required to establish a prima facie case varies from measure to measure, from provision to provision, and from case to case.[879]

5.163 In this dispute, however, Korea is not sure whether the European Communities indeed demonstrated all the factual evidence and legal arguments to establish existence of an actionable subsidy. According to Korea, the European Communities seems to have catalogued all kinds of governmental programmes which are directly or indirectly related to the U.S. LCA industry and then believe that it has satisfied its prima facie obligation. The European Communities may hope that it will be able to obtain further evidence in the course of the current proceedings or that the Panel may somehow do the work for it, but Korea submits that the Panel should reject such an attempt if it confirms that the European Communities fails to satisfy the prima facie standard.[880]

2. Finding of benefit must be based on the comparison between the terms of the alleged subsidy program and comparable terms available in the commercial market

5.164 Korea notes that another area of dispute here is whether there exists a benefit conferred by the U.S. Government on Boeing through various governmental programmes. Korea submits that a decision of existence of benefit can only be made by identifying a comparable commercial market and then comparing the terms of the alleged subsidy programme with the terms of the comparable transactions in the commercial market.[881] Simply offering a conclusory statement that a Member has a regulation in place to ensure non-preferential treatment does not rise to the comparison as mandated by Articles 1.1(b) and 14 of the SCM Agreement,[882] and thus does not prove or disprove the existence of a benefit.[883]

5.165 Korea points out that the Appellate Body's past decisions have confirmed that the identification of a benefit under Articles 1.1(b) and 14 requires a comparison.[884] Thus Korea submits that without such a comparative analysis, it is simply not possible to state whether a benefit exists. In

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[878] Executive Summary of Japan's written submission, para. 16.

[879] Executive Summary of Korea's written submission, footnote 1 referring to Appellate Body Report, *US – Wool Shirts and Blouses*, para. 14. Executive Summary of Korea's written submission, para. 3.

[880] Executive Summary of Korea's written submission, para. 4.

[881] Executive Summary of Korea's written submission, footnote 2. *See* Articles 1.1(b) and 14 of the SCM Agreement.

[882] Executive Summary of Korea's written submission, footnote 3. Although Article 14 of the SCM Agreement addresses benefit calculation in a countervailing duty investigation, Korea believes that to the extent a benefit finding is concerned, the same or similar rule also applies in the actionable subsidy context.

[883] Executive Summary of Korea's written submission, para. 5.

[884] Executive Summary of Korea's written submission, footnote 4 referring to Appellate Body Report, *Canada – Aircraft*, para. 157.

addressing the benefit issue in this dispute, therefore, the Panel should ensure that such a comparison is properly conducted.[885]

3. Providing general infrastructure should not constitute a financial contribution from the government

5.166 Korea contends that the European Communities appears to challenge certain programs, including Project Olympus Master Site Agreement, I-5 Expansion Project, and the SR 527 Expansion Project, as subsidies even if the programs are apparently for the establishment of general infrastructure. Apparently, they seem to be open to all and serve a broad range of people, businesses, and communities. Korea believes that the European Communities' submission does not sufficiently show that these facilities and programs serve a particular company or an industry.[886]

5.167 While Korea does not express an opinion on the specific facts of the U.S. Government's programs at issue here, Korea notes that Article 1.1(a)(1)(iii) of the SCM Agreement should be dispositive if the Panel indeed determines that the public at large is served by these programs. According to the Article, it is only the provision of goods and services "other than general infrastructure" that can be considered to constitute financial contribution by the government. As such, Korea believes that the European Communities, as the complainant in this dispute, must provide prima facie evidence that the claimed subsidies are not "general infrastructure". Korea considers that it is not clear whether the European Communities has indeed satisfied this obligation in its first written submission.[887]

4. An export subsidy can only be found when the granting of a subsidy is "tied to" actual or anticipated exportation or export earnings

5.168 Korea notes that the European Communities also argues that the tax measures found in HB 2294 are contingent on export performance and thus the program constitutes a prohibited subsidy under Article 3.1(a) of the SCM Agreement. In this respect, Korea notes that a simple fact that Boeing exports many of its airplanes should not be the legal standard for determining whether the program is a prohibited export-contingent subsidy. The relevant precedents of panels and the Appellate Body mandate a specific inquiry in this regard.[888]

5.169 According to Korea, in the light of precedents it should therefore be demonstrated by relevant facts that such a subsidy would not have been granted to the recipient but for anticipated exportation or export earnings.[889] As put forward by the panel in *Canada – Aircraft* in more concrete terms, "the factual evidence adduced must demonstrate that had there been no expectation of export sales (i.e. 'exportation' or 'export earnings') 'ensuing' from the subsidy, the subsidy would not have been granted".[890]

5.170 Based on the reading of previous panel and Appellate Body reports, Korea is of the view that, in order to establish that a certain U.S. program is "tied to" export performance, the

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[885] Executive Summary of Korea's written submission, para. 6.

[886] Executive Summary of Korea's written submission, footnote 5. *See*, for instance, European Communities' first written submission, paras. 89-93. Executive Summary of Korea's written submission, para. 7.

[887] Executive Summary of Korea's written submission, para. 8.

[888] Executive Summary of Korea's written submission, para. 9.

[889] Executive Summary of Korea's written submission, footnote 6 referring to Panel Report, *Canada – Aircraft*, para. 9.332.

[890] Executive Summary of Korea's written submission, footnote 7 referring to Panel Report, *Canada – Aircraft*, para. 9.339. Executive Summary of Korea's written submission, para. 10.

European Communities has to prove that the benefit would not have been granted to Boeing if the U.S. Government had known that no export sales would ensue from the program.[891]

VI. INTERIM REVIEW

A. INTRODUCTION

6.1 On 15 September 2010, the Panel submitted its Interim Report to the parties. On 27 October 2010, both parties submitted written requests for review of precise aspects of the Interim Report. On 17 November 2010, the parties submitted comments on each other's requests for review. Neither party requested that the Panel hold an interim review meeting.

6.2 Pursuant to Article 15.3 of the DSU, the findings of the final panel report must include a discussion of the arguments made by the parties at the interim review stage. This section of the Panel Report provides such a discussion. As Article 15.3 makes clear, this section forms part of the Panel's findings.

6.3 The Panel explains below its response to issues of a substantive nature raised by the parties in their comments on the Interim Report. The Panel has also corrected a number of typographical and other non-substantive errors throughout the Report[892], including those identified by the parties, which are not referred to specifically below.

6.4 Due to changes as a result of our review, the numbering of paragraphs and footnotes in the Final Report has changed from the Interim Report. The text below refers to the paragraph and footnote numbers in the Interim Report regarding which the parties requested review. Where we have made changes, a reference to the corresponding paragraph or footnote number in the Final Report is included (in parentheses) for ease of reference.

6.5 In order to facilitate understanding of the interim review comments and changes made, the following section is structured to follow the organization of the Report itself, with the review requests of the parties, and their comments, addressed sequentially.

B. PARTIES' REQUESTS FOR CHANGES TO THE INTERIM REPORT

1. Footnote 1096

6.6 The European Communities[893] submits that footnote 1096 of the Interim Report is incorrect because it refers to the City of Wichita IRB Ordinances, rather than to the Washington B&O tax system. The European Communities requests that the footnote be changed to "Business and Occupation Tax, RCW 82.04, Exhibit US-179 and United States' first written submission, para. 430".[894]

6.7 The United States makes no comment on the European Communities' request.

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[891] Executive Summary of Korea's written submission, para. 11.

[892] Thus, the Panel has corrected stylistic and grammatical errors and errors in references to submissions and exhibits. The Panel has also corrected inconsistencies in terminology and has made changes to improve the clarity and accuracy of the Report.

[893] The Panel notes that elsewhere in this Report the complainant in this dispute is always referred to as "European Communities". Therefore, while the entity that submitted the request for interim review was the "European Union", the Panel continues to refer in this interim review section to "European Communities" rather than to "European Union".

[894] European Communities, Request for Interim Review, p. 3.

6.8 The Panel agrees with the European Communities' comment and has amended footnote 1096 of the Interim Report (now footnote 1218) as suggested by the European Communities.

2. Paragraph 7.147

6.9 The European Communities requests that the Panel amend paragraph 7.147 of the Interim Report in order to convey the European Communities' position that Boeing could in fact simultaneously claim the Washington B&O tax credit for property taxes *and* the leasehold excise tax exemption *and* the property tax exemption. In particular, the European Communities suggests that the following be added to the end of footnote 1124: "The European Communities argued in later submissions that Boeing may, in fact, claim all three subsidies simultaneously, under certain circumstances. See European Communities' response to question 363, paras. 166-174".[895]

6.10 The United States objects to the European Communities' request. According to the United States, the Panel should not restate the European Communities' erroneous argument that Boeing can simultaneously claim the Washington B&O tax credit for property taxes, the leasehold excise tax exemption and the property tax exemption. This is because in paragraphs 7.139-7.159 of the Interim Report, the Panel in fact addressed and rejected this proposition.[896]

6.11 In the European Communities' response to question 363, the European Communities explains its view that there are two circumstances in which Boeing could claim the Washington B&O tax credit for property taxes *and* the leasehold excise tax exemption *and* the property tax exemption. In particular, the European Communities first contends that Boeing could claim a different tax exemption from year to year and, second, that Boeing could claim all three tax exemptions in the same year if it were to set up two different legal persons, one eligible for the B&O tax credit and the other for the leasehold excise and property tax exemptions. Therefore, the European Communities presents only one scenario in which Boeing could claim all three tax exemptions simultaneously (i.e. in the same year). Consequently, the Panel has added text to the end of footnote 1124 of the Interim Report (now footnote 1246) to discuss this scenario. The Panel has also added a new paragraph after paragraph 7.80 of the Interim Report (now paragraph 7.80), to make the summary of the European Communities' arguments more comprehensive.

3. Paragraphs 7.163-7.164

6.12 The European Communities argues that in paragraphs 7.163-7.164 of the Interim Report the Panel has attributed arguments to the European Communities regarding the meaning of "potential direct transfer of funds" that are broader than those it actually presented. The European Communities requests the Panel to modify its summary of the European Communities' arguments on potential direct transfer of funds in paragraphs 7.163-7.164 of the Interim Report. In particular, the European Communities requests that the Panel eliminate suggestions that the European Communities considers the following situations as sufficient to demonstrate a potential direct transfer of funds: (i) "any time there is a possibility that the government will transfer funds in the future"; (ii) "almost every direct transfer of funds could also, at an earlier date, be characterized as a potential direct transfer of funds"; (iii) "a government alluding to the possibility of providing future funding to an industry"; and (iv)"the mere possibility that a government may transfer funds". The European Communities recalls that in its comments on the United States' response to question 124, it stated that there must be a "defined triggering event" for a potential direct transfer of funds to exist.[897]

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[895] European Communities, Request for Interim Review, p. 3.
[896] United States, Comments on the European Communities' Request for Interim Review, para. 4.
[897] European Communities, Request for Interim Review, p. 4.

6.13 The United States objects to the European Communities' request. According to the United States, the Panel was not presenting a summary of the European Communities' arguments in paragraphs 7.163-7.164. Rather, the Panel was setting out its analysis of the parties' arguments and, in particular, the *implications* of the European Communities' arguments. For example, paragraph 7.164 states: "*If the Panel concludes that this is a potential direct transfer of funds*, it may be possible to find, for example, that any time a government makes a general promise to provide assistance or support to an industry, a financial contribution under Article 1.1(a)(1)(i) exists, because one possible means of providing assistance to an industry is through a direct transfer of funds". According to the United States, the European Communities is essentially asking the Panel to revise its analysis and conclusions, without providing a reason for why the Panel should do so.[898]

6.14 The Panel has amended paragraph 7.163 of the Interim Report (now paragraph 7.164) to provide a more accurate description of the European Communities' position that there must be a "defined set of circumstances" that triggers the possible transfer of funds. For the same reason, the Panel has also amended the third sentence of paragraph 7.164 of the Interim Report (now paragraph 7.165). As explained at the end of paragraph 7.164, these changes do not alter the Panel's view that the European Communities' interpretation of the notion of a "potential direct transfer of funds" is problematic.

4. Paragraph 7.165

6.15 The European Communities requests that the Panel add the following phrase to the end of the last sentence of paragraph 7.165 of the Interim Report: "with respect to the alleged potential direct transfer of funds". The European Communities argues that this addition will provide greater clarity regarding the scope of the findings on benefit, which are found in the subsection following paragraph 7.165.[899]

6.16 The United States objects to the European Communities' request. According to the United States, the European Communities' proposed addition to the paragraph does not accurately reflect the Panel's finding. This is because the Panel did not make a finding regarding whether Article 10.4.1 of the MSA confers a financial contribution under Article 1.1 of the SCM Agreement in the form of a potential direct transfer of funds or in any other form. Rather, the Panel reasoned that because the measure did not confer a benefit under Article 1.2, there was no need to determine whether the measure conferred a financial contribution. Consequently, the European Communities' requested modification to paragraph 7.165 would introduce an inaccuracy into the Panel's statement.[900]

6.17 The requested modification appears to stem from a concern that the statement in the last sentence of paragraph 7.165 of the Interim Report (now paragraph 7.166) "the European Communities has not demonstrated that a benefit to Boeing exists under Article 1.1(b)" could also refer to the benefit finding for those measures found to constitute a financial contribution under Article 1.1(a)(1)(ii). Therefore, the Panel has amended the paragraph by adding "...with respect to the alleged potential direct transfer of funds". In relation to the United States' concern about the requested amendment, the use of the term "alleged" ensures that the modification remains consistent with the Panel's position of not reaching a conclusion on whether a potential direct transfer of funds exists.

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[898] United States, Comments on the European Communities' Request for Interim Review, paras. 5-7.
[899] European Communities, Request for Interim Review, p. 4.
[900] United States, Comments on the European Communities' Request for Interim Review, para. 8.

BCI deleted, as indicated **[***]**

5. Paragraph 7.288

6.18 Both the European Communities and the United States request that the Panel delete the reference to "Spirit" in the second sentence of paragraph 7.288 of the Interim Report and substitute it with "Washington State component manufacturers".[901] Further, the European Communities suggests that the figure at the end of the last sentence of the paragraph should be $6.8 million, rather than $8.6 million.[902] The United States makes no comment on this suggestion.

6.19 The Panel agrees with the parties and has changed the word "Spirit" in the second sentence of paragraph 7.288 (now paragraph 7.289) to "Washington State component manufacturers". The Panel has also corrected the typographical error in the final sentence by changing the figure from $8.6 million to $6.8 million.

6. Paragraph 7.291

6.20 The European Communities requests that the Panel clarify that its discussion of benefit in paragraph 7.291 of the Interim Report is limited to the pass-through context and does not apply generally to the evaluation of the *amount* of a benefit accorded by a financial contribution. In particular, the European Communities requests that the fourth sentence be modified to read: "The benefit of a subsidy, as that term is used in Article 1.1(b) of the SCM Agreement, cannot increase beyond 100 per cent when it passes from the recipient of the financial contribution to another entity".[903]

6.21 The European Communities also suggests amendments to the fifth, sixth and seventh sentences of the paragraph. According to the European Communities, if the sentences were not modified, they could be misinterpreted as addressing the calculation of the *amount* of the benefit to the initial subsidy recipient, rather than the pass-through to another entity. The European Communities requests that the sentences be modified to clarify that the finding relates to the need to distinguish between the value of any follow-on trade effects resulting from a subsidy and the value of the benefit itself. In particular, the European Communities suggests the following changes:

> In the context of the SCM Agreement, the benefit of a subsidy is ~~the amount by which~~ established when the terms of the financial contribution are more favourable than those available on the market. This ~~is a one-time calculation~~ determination is made in the first instance by reference to the recipient of the financial contribution. The benefit ~~at the time the financial contribution is provided~~ is not increased by any follow-on trade effects that may result from the financial contribution, such as any additional price changes that may result when a subsidized part is placed in the stream of commerce.[904]

6.22 The United States has no comments regarding the European Communities' proposed edit to the fourth sentence of paragraph 7.291. However, the United States objects to the modification of the fifth, sixth and seventh sentences. This is because the European Communities' suggestion introduces an entirely new concept of "follow-on trade effects". Further, the modification does not clarify the Panel's statement, which is already entirely clear, namely that there can be no "additional" benefit

[901] European Communities, Request for Interim Review, p. 4.; United States, Request for Interim Review, para. 3.
[902] European Communities, Request for Interim Review, p. 4.
[903] European Communities, Request for Interim Review, p. 5.
[904] European Communities, Request for Interim Review, p. 5.

over and above the amount calculated, on the basis of a one-time calculation, at the time the financial contribution is provided.[905]

6.23 Although the Panel is of the view that there are no circumstances in which the benefit of a subsidy can increase beyond that which exists at the time the financial contribution is provided, it has modified the fourth sentence of paragraph 7.291 of the Interim Report (now paragraph 7.292) in order to clarify the context of the discussion. The Panel has also clarified the second sentence of the paragraph by adding "benefit of the" before the term "subsidy". In relation to the suggested amendments to the fifth, sixth and seventh sentences, the Panel is of the view that the discussion of the amount of the benefit is relevant to the pass-through analysis, because the amount of the benefit of the subsidy is the upper bound for the amount of any pass-through of the benefit that can occur. The Panel has made changes to clarify its discussion in the fifth through seventh sentences of paragraph 7.291 of the Interim Report (now paragraph 7.292). For the purposes of clarification, the Panel has also made amendments to the tenth sentence of the paragraph.

7. Paragraph 7.296

6.24 According to the European Communities, paragraph 7.296 of the Interim Report suggests that the United States presented a specific example that Professor Asker could have reviewed and rebutted, but did not. The European Communities requests a modification to the paragraph to clarify that Professor Asker did not have an opportunity to respond to the United States' specific example. In particular, the European Communities suggests that the tenth sentence of the paragraph be amended as follows: "...he ~~does~~ did not ~~address~~ anticipate the scenario postulated by the United States in its final set of comments...".[906]

6.25 The United States objects to the European Communities' request. The United States argues that there is no basis on which to conclude whether or not Professor Asker anticipated the scenario presented by the United States. Further, the scenario referred to by the Panel in paragraph 7.296 was presented by the United States to demonstrate a shortcoming in Professor Asker's model. It is precisely because his model fails to address or anticipate the scenario that the United States considers the model unreliable. This is true regardless of when the United States highlighted the flaw in the model.[907]

6.26 The Panel has modified the text of the ninth sentence of paragraph 7.296 of the Interim Report (now paragraph 7.297) to avoid the impression that the United States presented a specific example and that Professor Asker reviewed and ignored it.

8. Paragraph 7.540

6.27 The European Communities requests the Panel to correct certain factual errors in paragraph 7.540 of the Interim Report. First, the European Communities argues that in the fifth sentence, only the rate paid by Boeing per 100 cubic feet ("ccf") of water consumed in 2006 can be said to be "clearly higher" than the rate mentioned in the MSA. It therefore suggests that the reference to "2004, 2005 and 2006 were" be changed to "2006 was" in this sentence. The European Communities notes that the Panel references the rate of $0.65 per 1,000 gallons for water services in Exhibit C-1 of the MSA, which the European Communities previously converted to $0.486 per ccf. The European Communities recalls that the City of Everett has a tiered rate structure for water consumption, whereby lower consumption levels receive higher marginal rates; and City of Everett water rates also vary by usage (i.e. whether for commercial, industrial, irrigation, or fire protection).

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[905] United States, Comments on the European Communities' Request for Interim Review, para. 9.
[906] European Communities, Request for Interim Review, p. 5.
[907] United States, Comments on the European Communities' Request for Interim Review, para. 10.

Thus, the European Communities submits that a comparison of a rate for Boeing's water consumption derived from the information presented in the "totals" rows in Exhibit EC-154 with the rate referenced in Exhibit C-1 of the MSA (which is for Boeing's industrial water consumption) is inaccurate. Rather, an accurate comparison should be based on a rate derived from the rows in Exhibit EC-154 for Boeing's 10" industrial metered water line at W Casino Road, which represents the bulk of Boeing's water consumption. Based on this row, Boeing consumed 187,498 ccf and paid $91,825.48 in 2004, for an average rate of $0.490 per ccf; Boeing consumed 178,445 ccf and paid $87,437.15 in 2005, for an average rate of $0.490 per ccf; and Boeing consumed 55,685 ccf and paid $28,740.35 in 2006, for an average rate of $0.516 per ccf. Thus, the European Communities submits that only Boeing's average rate for industrial water consumption in 2006 (i.e. $0.516 per ccf) can be said to be "clearly higher" than the rate derived from the MSA (i.e. $0.486 per ccf). This is also consistent with the final page of Exhibit EC-154, where the City of Everett Utilities Finance Manager explains with respect to water rates that "2006 is the first *year* of a three-year rate increase".[908]

6.28 Second, in the final sentence of paragraph 7.540, the European Communities suggests that the reference to "water filtration and sewer services" be changed to just "sewer services", because the rate for water filtration is not part of the $3.127 per ccf rate referenced from Exhibit C-2 of the MSA to which the Panel is drawing a comparison. Rather, Exhibit C-2 references only the rate for sewer services.[909]

6.29 The United States makes no comment on the European Communities' request.

6.30 The Panel accepts that the calculation of the rate paid by Boeing for water service proposed by the European Communities in its interim review comments is more accurate than the calculation made by the Panel in paragraph 7.540 of the Interim Report (now paragraph 7.541) and that based on this more accurate calculation it is only in 2006 that the rate paid by Boeing per 100 cubic feet of water consumed was clearly higher than the rate referred to in the MSA. The Panel has therefore corrected the fifth sentence of paragraph 7.540 of the Interim Report (now paragraph 7.541) by deleting the reference to 2004 and 2005. The Panel also agrees with the European Communities that because exhibit C-2 to the MSA only refer to sewer services, the last sentence of paragraph 7.540 of the Interim Report (now paragraph 7.541) should be modified by deleting the reference to water filtration services. The Panel notes that these corrections to paragraph 7.540 of the Interim Report (now paragraph 7.541) do not affect the main point made in this paragraph that "the evidence before {the Panel} reveals that the rates charged to Boeing by the City of Everett and Snohomish County for the use of certain utility services have actually increased since 2003".

9. Paragraphs 7.751 and 7.778

6.31 With respect to paragraph 7.751 of the Interim Report (now paragraph 7.752), the European Communities argues that in its specificity analysis, the Panel does not complete its analysis regarding "predominant use" of the subsidy programme by certain enterprises, stating instead that "it is not necessary for us to duplicate the comparison" that the Panel makes in the section on "disproportionately large amount". The European Communities submits that at no stage does the Panel take a view on "predominant use" as a factor supporting the finding of de facto specificity. Rather, at paragraph 7.778 of the Interim Report (now paragraph 7.779), the Panel appears to base its conclusion exclusively on the "disproportionately large amount" factor. The European Communities requests that the Panel make a finding on whether the Wichita IRBs are specific in view of "predominant use" of the subsidy programme by certain enterprises.[910]

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[908] European Communities, Request for Interim Review, p. 7.
[909] European Communities, Request for Interim Review, p. 7.
[910] European Communities, Request for Interim Review, p. 8.

6.32 The United States objects to the European Communities' request. The United States notes that the Panel found that the measure at issue was de facto specific on the grounds that a disproportionately large amount of IRBs were issued to Boeing. According to the United States, it is within a Panel's discretion to exercise judicial economy on an issue, as long as all findings necessary to resolve the dispute are made. Given that the Panel reached a conclusion regarding whether the measure at issue was specific under Article 2.1 of the SCM Agreement, is was appropriate for the Panel to decline to rule on whether the same measure was also de facto specific on an additional basis, namely due to "predominant use" of the subsidy programme by certain enterprises.[911]

6.33 The Panel declines to modify its Interim Report by reaching a conclusion on whether "predominant use" of the subsidy programme by certain enterprises supports a finding of de facto specificity. The Panel has concluded that the tax abatements granted under the Wichita IRB programme are de facto specific on the grounds that they were granted in disproportionately large amounts to Boeing and Spirit. This is sufficient to resolve the question of whether the tax abatements are specific. Therefore, it is within the Panel's discretion to decline to reach a conclusion regarding the "predominant use" factor. The European Communities has not advanced a convincing reason regarding why it is necessary for the Panel to make the additional finding that it seeks.

10. Paragraph 7.768

6.34 The European Communities requests that the Panel add the phrase "(i.e. after it had acquired Boeing's LCA operations in Wichita)" after the second instance of the word "Spirit" in the first sentence of the paragraph. According to the European Communities, this will clarify why it is appropriate to compare Spirit's 2006 share of employment with Boeing's and Spirit's combined 1979-2005 share of IRBs.[912]

6.35 The United States makes no comment on the European Communities' request.

6.36 The Panel has added the phrase "(i.e. after it had acquired Boeing's LCA operations in Wichita)" after the second instance of the word "Spirit" in the first sentence of paragraph 7.768 of the Interim Report (now paragraph 7.769).

11. Paragraph 7.841

6.37 With respect paragraph 7.841 of the Interim Report, the European Communities requests that the Panel make a finding regarding whether the KDFA bonds are specific within the meaning of Article 2.1 of the SCM Agreement.[913]

6.38 The United States objects to the European Communities' request. According to the United States, the Panel acted within its discretion in declining to make a finding on whether the KDFA bonds were specific. Such a finding was not necessary to resolve the dispute. Further, the European Communities has not provided any basis for its request.[914]

6.39 The Panel declines to modify its Interim Report by making a finding regarding whether the KDFA bonds are specific within the meaning of Article 2.1 of the SCM Agreement. As explained in paragraph 7.841 of the Interim Report (now paragraph 7.842), the Panel finds that there is no subsidy to Boeing and therefore does not consider it necessary to decide the question of specificity. The

[911] United States, Comments on the European Communities' Request for Interim Review, paras. 11-12.
[912] European Communities, Request for Interim Review, pp. 8-9.
[913] European Communities, Request for Interim Review, p. 9.
[914] United States, Comments on the European Communities' Request for Interim Review, para. 13.

European Communities does not advance any reasoning to explain why the Panel should make a finding on specificity in relation to the KDFA bonds.

12. Paragraph 7.848 and footnote 2145

6.40 The European Communities requests the Panel to replace the final sentence of paragraph 7.848 of the Interim Report with: "In particular, the European Communities observes that the United States has not provided full copies of all of the documents constituting the full set of long-term supply agreements. Absent full copies of all those documents, the European Communities requests the Panel to draw the necessary inferences on this issue." As a reference to this expanded description, the European Communities requests that the Panel add the following to footnote 2145: "European Communities' comments on United States' response to question 252, paras 364-365; European Communities comments on United States' response to question 255".[915]

6.41 The United States does not object to the proposed modification to footnote 2145. However, the United States objects to the European Communities' proposed amendment to paragraph 7.848 because it is unnecessary. According to the United States, the paragraph already incorporates the European Communities' arguments regarding the redacted supply contracts and explains the European Communities' analysis of the publicly available information underpinning its "pass-through" arguments. Further, in paragraph 7.882 (now paragraph 7.883), the Panel addresses and rejects the European Communities' arguments regarding lack of access to un-redacted versions of supply agreements.[916]

6.42 In paragraph 7.848 of the Interim Report (now paragraph 7.849) the Panel is summarizing the European Communities' arguments. The additions to the paragraph that the European Communities requests can be found in the European Communities' comments on the United States' response to questions 252 and 255. Therefore, the Panel has modified the summary of arguments in the manner suggested by the European Communities. The Panel has also made the additions to footnote 2145 (now footnote 2268) suggested by the European Communities.

13. Paragraph 7.882

6.43 The European Communities requests that the Panel add the following to the end of the first sentence of paragraph 7.882 of the Interim Report: "..., but further recall that those documents were provided with numerous redactions" (with a corresponding footnote stating: "See European Communities' comments on United States' response to question 252, para. 364). Similarly, the European Communities requests that the second sentence of the paragraph be modified as follows: "Our review of the un-redacted portions of these documents...".[917]

6.44 The United States objects to the European Communities' request. The United States submits that the modification proposed by the European Communities is unnecessary because the Panel addressed and rejected the European Communities' argument regarding the un-redacted versions of the supply agreements.[918]

6.45 The European Communities requests modification of paragraph 7.882 of the Interim Report (now paragraph 7.883) in order to highlight that the documents referred to in the paragraph were redacted. To accommodate this request, the Panel has amended the first sentence of the paragraph as follows: "…we recall our analysis of the documents on the record, created at or around the time of

[915] European Communities, Request for Interim Review, p. 9.
[916] United States, Comments on the European Communities' Request for Interim Review, para. 14.
[917] European Communities, Request for Interim Review, p. 9.
[918] United States, Comments on the European Communities' Request for Interim Review, para. 15.

sale and provided by the United States in redacted form". The Panel has added the corresponding footnote requested by the European Communities.

14. Paragraph 7.944 and footnote 2286

6.46 The European Communities requests that the Panel amend the second sentence of paragraph 7.944 of the Interim Report, to clarify the fact that the European Communities' arguments related to NASA "enabling the US LCA industry to exploit the results thereof {of NASA R&D programmes} by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ('LERD') or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research" were reflected in both its challenge to the NASA R&D programmes (as the Panel acknowledges, for example, in paragraph 7.1013), as well as the separate challenge to "NASA/DOD Intellectual Property Rights Transfers/Waivers." The European Communities suggests that this clarification can be achieved through making the following changes to the second sentence: "... the European Communities addresses these measures primarily in the sections of its submissions regarding 'NASA/DOD Intellectual Property Rights Transfers/Waivers~~.~~, but also throughout its discussion of the nature of the NASA aeronautics R&D programmes."[919]

6.47 In addition, the European Communities submits that footnote 2286 should refer to the European Communities' response to question 215(b) in which the European Communities addressed this issue, rather than the response to question 215(a).[920]

6.48 The United States shares the Panel's understanding that the European Communities addressed NASA's IP policies in the sections of its submission related to NASA/DOD Intellectual Property Rights Transfers/Waivers, and accordingly suggests that the Panel not make the change suggested by the European Communities. The United States submits that if the Panel decides that a reference to the European Communities' discussion of NASA IP policies in the context of its NASA R&D claim is appropriate, it should reflect the nature of that discussion by replacing the European Communities' suggested language with the following change: ". . . the European Communities addresses these measures in the sections of its submissions regarding NASA/DOD Intellectual Property Rights Transfers/Waivers, and also references them in its discussion of NASA Aeronautics R&D programs."[921]

6.49 The Panel has amended the text of the second sentence of paragraph 7.944 of the Interim Report (now paragraph 7.946) by inserting the word "primarily" before "in the sections of its submissions". Because the Panel considers that this issue is addressed in both question 215(a) and (b), the Panel has amended footnote 2286 (now footnote 2412) by substituting "215" for "215(a)".

15. Paragraph 7.982

6.50 The European Communities requests that the Panel modify the third sentence of paragraph 7.982 of the Interim Report as follows: "The contracts and agreements primarily fall into two different categories: (i) 'procurement contracts', and (ii) Space Act Agreements". The European Communities makes this request in the light of the fact that a limited number of NASA instruments other than "procurement contracts" and Space Act Agreements are at issue in the present dispute, as made clear by: Exhibit US-1245, which references at least two cooperative agreements and two purchase orders; and Interim Report, paragraph 4.73, which references the United States' explanation at the first panel meeting that NASA enters into cooperative agreements, technology investment

[919] European Communities, Request for Interim Review, pp. 9-10.
[920] European Communities, Request for Interim Review, p. 10.
[921] United States, Comments on the European Communities' Request for Interim Review, para.16.

agreements, and other transactions. The European Communities suggests that the Panel may add a footnote at the end of the third sentence referencing Exhibit US-1245 and Interim Report, paragraph 4.73, to make note that a limited number of other NASA instruments – such as cooperative agreements, purchase orders, technology investment agreements, and other transactions – are also at issue in this dispute.[922]

6.51 The United States objects to the European Communities' request. The United States argues that to say that the contracts and agreements covered by the European Communities' challenge "primarily" fall into the categories of procurement contracts and Space Act Agreements would indicate an open list that could encompass instruments not at issue in this case. (As demonstrated in Exhibit US-1245, there are no technology investment agreements or other agreements between NASA and Boeing under the challenged programs.) If the Panel considers it appropriate to adjust the language in this paragraph to reflect the two cooperative agreements under the challenged programs, it should expand its list to indicate specifically that category of agreement: "The contracts and agreements fall into three different categories: (i) 'procurement contracts', (ii) Space Act Agreements, and (iii) cooperative agreements."[923]

6.52 The Panel has amended paragraph 7.982 of the Interim Report (now paragraph 7.945) and added a footnote, in order to reflect that NASA had a limited number of cooperative agreements with Boeing.

16. Paragraph 7.1038

6.53 Although the Panel considers that "it was not necessary for the European Communities to present benchmark evidence" in order to establish that a 'benefit' was conferred by the NASA transactions, the European Communities requests that the Panel note that the European Communities did, in fact, present such benchmark evidence. The European Communities suggests that the Panel could make this point with the addition of a footnote attached to the end of the fifth sentence of the paragraph, stating as follows: "Although it was not necessary for the European Communities to present benchmark evidence, it did supply such evidence to the Panel (e.g. The Declaration of Regina Dieu (Exhibit EC-1178)). See paragraph 7.1029 of this Report".[924]

6.54 The United States objects to the European Communities' request. The United States submits that the Interim Report already reflects the full argument and evidence submitted by the European Communities, including a reference to the Declaration of Regina Dieu, in paragraph 7.1029. As this evidence played no role in the Panel's findings, the United States does not consider that an additional reference to Ms. Dieu, as requested by the European Communities, is either necessary or appropriate. Moreover, the particular text proposed by the European Communities would suggest that the Panel had found that the evidence submitted by the European Communities constituted a "benchmark". The United States submits that the Panel made no such finding.[925]

6.55 The Panel considers that the change proposed by the European Communities to paragraph 7.1038 of the Interim Report (now paragraph 7.1039) is unnecessary. The arguments of the European Communities regarding the Declaration of Regina Dieu are already reflected in paragraph 7.1029 of the Interim Report (now paragraph 7.1030).

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[922] European Communities, Request for Interim Review, p. 10.
[923] United States, Comments on the European Communities' Request for Interim Review, para.17.
[924] European Communities, Request for Interim Review, p. 11.
[925] United States, Comments on the European Communities' Request for Interim Review, para. 18.

BCI deleted, as indicated **[***]**

17. Paragraph 7.1078

6.56 The European Communities submits that Exhibit EC-1440 does not support the conclusion in the penultimate sentence of paragraph 7.1078 of the Interim Report that "it appears that over the period 1989-2006, these four centres accounted for more than 99 per cent of 'Aeronautical Research & Technology Resources'". First, Exhibit EC-1440 relates to only the period 1989-2000; and second, Exhibit EC-1440 shows that over the period 1989-2000, these four centres (i.e. Langley, Glenn (formerly Lewis), Ames, and Dryden) accounted for only 95.3% of aeronautical R&D resources. Thus, the European Communities requests that the Panel revise the penultimate sentence to conclude that "it appears that over the period 1989-2000, these four centres accounted for 95.3 per cent of 'Aeronautical Research & Technology Resources'". The European Communities also requests that the Panel delete the final sentence of this paragraph in view of this result.[926]

6.57 The United States objects to the European Communities' request. The United States submits that in paragraph 7.1078 of the Interim Report, as drafted, the Panel properly compares the amount of funding for research at NASA aeronautics research centres (i.e. Langley, Glenn, Ames and Dryden) with funding for research conducted at its other non-aeronautics research centres. The revised calculation proposed by the European Communities treats research and technology resource budget expenditures attributable to NASA headquarters as pertaining to research conducted by the non-aeronautics research centres. NASA headquarters is not a research centre, and therefore the United States considers that the Panel properly excluded this element of the NASA budget from its calculation in this context. The United States observes, however, that 95.3 percent of NASA's aeronautics budget still constitutes "substantially all" of its expenditures.[927]

6.58 The Panel declines the European Communities' request. First, while it is correct that Exhibit EC-1440 only covers the period FY 1991-FY2000, the nature of the information set out in EC-1440 supports a general conclusion about the share of aeronautical R&D that the four centres accounted for over the period 1989-2006. Second, as the United States explains in its comments on this request, the Panel compared the amount of funding for research at NASA aeronautics research centres with funding for research conducted at its other non-aeronautics research centres. The revised calculation proposed by the European Communities treats research and technology resource budget expenditures attributable to NASA headquarters as pertaining to research conducted by the non-aeronautics research centres. However, that approach appears to presuppose that NASA headquarters is a research centre, which it is not. Accordingly**,** the Panel has left the final sentence of paragraph 7.1078 of the Interim Report (now paragraph 7.1079) unchanged.

18. Paragraphs 7.1079 and 7.1076

6.59 The European Communities requests that the Panel delete paragraph 7.1079 of the Interim Report in its entirety and modify the beginning of paragraph 7.1076 to read: "The European Communities advances two arguments in response to ...". The European Communities makes this request because the argument referenced by the Panel in paragraph 7.1079 is not an argument in response to the U.S. assertion that all contracts related to the European Communities' challenge must have been awarded by the four NASA centers in question; nor was the European Communities' point in making this argument that "Boeing's aeronautics R&D contracts with NASA account for less {than} 3.5 per cent of all of Boeing's contracts with NASA". Rather, the European Communities was simply responding to a separate argument made by the United States at paragraph 218 of the United States' response to Question 188, in which the United States suggested that the fact that 96.5 per cent of Boeing's contracts with NASA are related to non-aeronautics activities verifies that

[926] European Communities, Request for Interim Review, pp. 11-12.
[927] United States, Comments on the European Communities' Request for Interim Review, para. 19.

Boeing's aeronautics contracts with NASA were worth US$1.05 billion. Like the Panel, the European Communities did not view this U.S. argument as being on point.[928]

6.60 The United States makes no comment on the European Communities' request.

6.61 The Panel has modified paragraph 7.1076 of the Interim Report (now paragraph 7.1077) as requested by the European Communities and has deleted paragraph 7.1079 of the Interim Report. Although the European Communities advanced the argument in paragraph 7.1079 of the Interim Report in a paragraph that formed part of its comments on the United States' response to question 339, a footnote to that paragraph makes it clear that the point made in that particular paragraph actually pertained to an argument made by the United States in its response to question 188. The Panel therefore agrees with the European Communities that the argument described in paragraph 7.1079 does not pertain to the arguments of the United States in its response to question 339.

19. Footnote 2500

6.62 The United States requests that the Panel modify footnote 2500 by adding the following sentence: "The European Communities does not challenge the supply of goods and services under Space Act Agreements to the extent that Boeing pays cash in exchange for those goods and services."[929]

6.63 The European Communities makes no comment on the United States' request.

6.64 The Panel has modified footnote 2500 of the Interim Report (now footnote 2624) as requested by the United States. The Panel notes that the European Communities has clarified, for example in its response to question 158, paragraph 237, that "{w}ith respect to LCA-related SAAs, the European Communities challenges only instances where NASA provides goods and services pursuant to non-reimbursable and partially-reimbursable SAAs, in exchange for alleged 'in kind' remuneration".

20. Paragraph 7.1099

6.65 The European Communities requests that the Panel change the figure of "14 per cent" to "14.1 per cent" in the penultimate sentence of paragraph 7.1099 of the Interim Report, and that it change the figure of "$1.55 billion" to "$1.59 billion" in the final sentence. The European Communities also requests that the Panel make these modifications throughout its Report wherever the figures of "14 per cent" and "$1.55 billion" may appear. The European Communities recalls that, pursuant to the Panel's analysis in the preceding paragraphs, the relevant pools of money that must be allocated to Boeing are: (i) $7,446 million under the programme budgets that relate to aeronautics research contracts; (ii) $4,789 million under the programme budgets that do not relate to payments to contractors; and (iii) $6,469 million under the institutional support budgets. With regard to item (i), the United States suggested that $775 million be allocated to Boeing, which works out to 10.4 per cent (i.e. 775 / 7,446 = 0.104). However, the Panel determined that $1.05 billion should be allocated to Boeing, which works out to 14.1 per cent (i.e. 1,050 / 7,446 = 0.141). Next, with regard to items (ii) and (iii), the Panel decided to apply the same percentage as determined for item (i). This works out to $1.59 billion (i.e. (4,789 + 6,469) x 0.141 = 1,587).[930]

6.66 The European Communities notes that even if the Panel decides not to change "14 per cent" to "14.1 per cent" in the penultimate sentence, it should nonetheless change "$1.55 billion" to "$1.58 billion" in the final sentence, because (4,789 + 6,469) x 0.140 = 1,576. If the Panel chooses

[928] European Communities, Request for Interim Review, p. 12.
[929] United States, Request for Interim Review, para. 5.
[930] European Communities, Request for Interim Review, p. 13.

this approach, the European Communities requests that the Panel make this modification throughout its report wherever the figure of "$1.55 billion" may appear.[931]

6.67 The United States indicates that it has no comment on this request. However, the United States "recalls that the Panel's calculation is an estimate, and therefore rounding errors and small differences relative to the total sum are very relevant".[932]

6.68 The Panel declines the European Communities' requests regarding paragraph 7.1099 of the Interim Report (now paragraph 7.1099). The calculations and figures in question reflect the Panel's attempt to avoid false and artificial precision in its estimate of this particular subsidy. The "14 per cent" figure reflects a rounding of 14.1% down to the nearest percentage point. The "$1.55 billion" figure reflects the fact that the figures the Panel used to arrive at the estimate of this particular subsidy were 14% of $4.7 billion + $6.4 billion, rather than $4.789 billion + $6.469 billion. The resulting figure (i.e. $1.554 billion) was then rounded down to "$1.55 billion". The Panel recalls the Appellate Body's pronouncement in *US – Upland Cotton* (cited several times in this Report) that in a case involving claims of serious prejudice, a "precise, definitive quantification is not required".

21. Paragraph 7.1100

6.69 The European Communities requests that the Panel amend paragraph 7.1100 of the Interim Report by adding a cross-reference to paragraph 7.1771, where the Panel discusses its understanding of the significant limitations on public dissemination by NASA. Specifically, the European Communities suggests the addition of the following sentence after the second sentence of paragraph 7.1100: "That said, the Panel has also found that this public dissemination was subject to significant limitations". This would be followed by a footnote with a cross-reference to paragraph 7.1771.[933]

6.70 Moreover, the European Communities requests the Panel to recall that to the extent that the publicly disseminated information benefits from patent protection, Boeing has the exclusive right (subject to the Government's own limited rights) to use that patented technology for approximately 17-20 years. While competitors may have knowledge of the patented technology through the patent disclosure and any associated reports, they are forbidden from using this technology pursuant to domestic patent laws, and will be subject to damages and/or injunctions if they infringe the patent. Thus, for patented technology, disclosure does not imply that Boeing has given up anything of value in exchange for the funds and access to facilities, equipment, and employees. For this reason, the European Communities requests that the Panel add the phrase "to the extent such public dissemination does not involve technology that has been patented" in the second sentence of paragraph 7.1100 before the phrase "that this represents ..."; further, the word "that" should be deleted in the phrase "that this represents ...".[934]

6.71 The United States objects to the European Communities' request. The United States submits that the Panel's point in this paragraph appears to be that the technical reports on each R&D project done by Boeing under the NASA programmes were publicly disseminated, and that the Panel made no factual findings that NASA's public dissemination of information was subject to "significant" limitations. Any delays in dissemination of a subset of reports that the European Communities seeks to reference are not relevant in this context. The United States also notes that the Panel made no findings with respect to a link between technologies discussed in particular reports and particular patents, and in any event, a patent on any inventions that may be discussed in the circulated reports

[931] European Communities, Request for Interim Review, p. 13.
[932] United States, Comments on the European Communities' Request for Interim Review, para. 20.
[933] European Communities, Request for Interim Review, p. 13.
[934] European Communities, Request for Interim Review, p. 13.

does not bear on the Panel's finding in this paragraph that the dissemination of the data and findings in the reports represent something of value given up in exchange for what it receives.[935]

6.72 The Panel declines the European Communities' request to make changes to certain statements in paragraph 7.1100 of the Interim Report (now paragraph 7.1100). The Panel understands that in proposing these changes the European Communities takes issue with the Panel's view expressed in paragraph 7.1100 that the transactions at issue cannot be treated as grants on the grounds that Boeing has given up something of value. The Panel notes that paragraph 7.1100 is part of a section of the Interim Report that deals with the determination of the amount of the subsidy, and that notwithstanding its observation in paragraph 7.1100 that the transactions at issue are not grants, the Panel explains in paragraph 71101 that it will treat "the full amount of the financial contributions provided to Boeing as a subsidy to Boeing's LCA division". The Panel therefore considers that when the statements in paragraph 7.1100 of the Interim Report which the European Communities seeks to qualify are viewed in their proper context it is unclear what purpose the proposed changes would serve.

22. Paragraph 7.1121 and footnote 2542

6.73 The European Communities requests that the Panel amend the second sentence of paragraph 7.1121 of the Interim Report to clarify the fact that the European Communities' arguments related to DOD "enabling the US LCA industry to exploit the results of such {DOD RDT&E} research, by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research" were reflected in both its challenge to the DOD RDT&E programmes (as the Panel acknowledges, for example, in paras. 7.1149-50), as well as the separate challenge to "NASA/DOD Intellectual Property Rights Transfers/Waivers". The European Communities suggests that this clarification can be made through making the following changes to the second sentence: "... the European Communities addresses these measures primarily in the sections of its submissions regarding NASA/DOD Intellectual Property Rights Transfers/Waivers~~.~~, but also throughout its discussion of the nature of the DOD RDT&E programmes." In addition, the European Communities submits that footnote 2542 should refer to the European Communities' response to question 215(b) in which the European Communities addressed this issue, rather than the response to question 215(a).[936]

6.74 The United States shares the Panel's understanding that the European Communities addressed DOD's IP policies in the sections of its submission related to NASA/DOD Intellectual Property Rights Transfers/Waivers, and accordingly suggests that the Panel not make the change suggested by the European Communities. The United States submits that if the Panel decides that a reference to the European Communities' discussion of DOD IP policies in the context of its DOD RDT&E claim is appropriate, it should reflect the nature of that discussion by replacing the European Communities' suggested language with the following change: ". . . the European Communities addresses these measures in the sections of its submissions regarding NASA/DOD Intellectual Property Rights Transfers/Waivers, and also references them in its discussion of DOD RDT&E programs."[937]

6.75 The Panel has amended paragraph 7.1121 and footnote 2542 of the Interim Report (now paragraph 7.1122 and footnote 2666) along the lines of the European Communities' request by inserting the word "primarily" before "in the sections of its submissions", and by substituting "215" for "215(a)".

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[935] United States, Comments on the European Communities' Request for Interim Review, para. 21.
[936] European Communities, Request for Interim Review, p. 14.
[937] United States, Comments on the European Communities' Request for Interim Review, para. 22.

BCI deleted, as indicated **[***]**

23. Paragraph 7.1148

6.76 The European Communities requests that the Panel add a footnote to the end of the first sentence of paragraph 7.1148 of the Interim Report, which would help to clarify the focus of the European Communities' arguments with respect to the dual use nature of the RDT&E programmes summarised immediately above. The European Communities submits that as currently drafted, this paragraph narrowly focuses on only two of the 23 programmes, and fails to provide any discussion of the European Communities' position on the remaining programmes, other than the statement in the first sentence about what the European Communities "does not dispute". The European Communities suggests the following text for the proposed footnote: "Rather than attempting to dispute the proposition that the RDT&E programmes provided some benefit and use to DOD, the European Communities focused its attention (and that of its experts) on demonstrating that the R&D funded through these programmes provided significant benefit and use to Boeing's LCA division. See paras. 7.1602-1604 of this Report; and Annex VIII.F.1 of this Report, paras. 26-36, 43-45, 50-51, 57-59, 74-75".[938]

6.77 The United States objects to the European Communities' request. The United States submits that the first sentence of paragraph 7.1148 of the Interim Report accurately and fully reflects the position taken, and arguments made, by the European Communities in these proceedings. The footnote purports to describe the mental process that led the European Communities to take the position that it took. That is not an appropriate insertion into the Panel's findings.[939]

6.78 The Panel declines the European Communities' request. The first sentence of paragraph 7.1148 of the Interim Report (now paragraph 7.1148) does not purport to describe or fully reflect the European Communities' position and argumentation on this issue.

24. Paragraph 7.1176

6.79 The European Communities requests that the Panel further summarise the European Communities' argument regarding the appropriate benchmark for evaluating "benefit" from DOD transactions. Because part of the European Communities' benchmark evidence for DOD is the same as its benchmark evidence for NASA, the European Communities suggests that the Panel could simply copy the fourth sentence of paragraph 7.1029 (including the footnotes), and paste it at the end of this paragraph 7.1176.[940]

6.80 The European Communities also requests that the Panel recall that the European Communities referenced DOD's pre-1992 recoupment policy as evidence of a market benchmark. In particular, the European Communities suggests that the Panel add the following sentence at the end of this paragraph:

> "The European Union also pointed to DOD's recoupment policy prior to June 1992, as evidence of a benchmark pursuant to which, in the words of DOD's own recoupment regulations, the Department of Defense intended 'to recover a fair share of its investment in nonrecurring costs related to products, and/or a fair price for its contribution to the development of related technology, when the products are sold, and/or when technology is transferred.'"

6.81 This sentence would conclude with a footnote, stating: "European Communities' second written submission, para. 479." The European Communities suggests that providing this additional

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[938] European Communities, Request for Interim Review, pp. 14-15.
[939] United States, Comments on the European Communities' Request for Interim Review, para. 23.
[940] European Communities, Request for Interim Review, p. 15.

detail in this paragraph would be consistent with the level of detail provided by the Panel in paragraph 7.1029, when it summarised the European Communities' arguments with respect to the benchmark issue in the context of discussing NASA transactions. It would also provide the context to understand the United States' rebuttal to the European Communities' arguments on the DOD recoupment policy, which is summarised at paragraph 7.1181 of the Interim Report.[941]

6.82 The United States makes no comment on the European Communities' request.

6.83 The Panel has made the changes to paragraph 7.1176 (now paragraph 7.1176) requested by the European Communities.

25. Paragraph 7.1184

6.84 Although the Panel considers that "it was not necessary for the European Communities to present benchmark evidence" in order to establish that a "benefit" was conferred by the DOD transactions, the European Communities suggests that the Panel note that the European Communities did, in fact, present such benchmark evidence. The European Communities suggests that the Panel could make this point with the addition of a footnote attached to the end of the fifth sentence of the paragraph, stating as follows: "Although it was not necessary for the European Communities to present benchmark evidence, it did supply such evidence to the Panel. See para. 7.1176 of this Report". The European Communities requests that this comment be considered together with the previous comment on paragraph 7.1176, in which it requests that the Panel summarize the benchmark evidence.[942]

6.85 The United States objects to the European Communities' request. The United States considers that the Panel has sufficiently summarized the European Communities' argument in the appropriate context. Here, the European Communities seeks to have the Panel add a reference to certain arguments and evidence with respect to which the Panel made no findings, including no finding as to whether the evidence in fact constituted "benchmark evidence".[943]

6.86 The Panel considers that the changes requested by the European Communities to paragraph 7.1184 of the Interim Report (now paragraph 7.1184) are unnecessary.

26. Paragraph 7.1196

6.87 The European Communities requests the Panel to clarify whether its finding of specificity in paragraph 7.1196 of the Interim Report based on the individual PEs is a finding under Article 2.1(a), Article 2.1(c), or both.[944]

6.88 The United States makes no comment on the European Communities' request.

6.89 The Panel has amended the text of the last sentence in paragraph 7.1196 (now paragraph 7.1196) to make it clear that it has found the subsidies at issue to be specific within the meaning of Article 2.1(a) of the SCM Agreement.

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[941] European Communities, Request for Interim Review, p. 13.
[942] European Communities, Request for Interim Review, pp. 15-16.
[943] United States, Comments on the European Communities' Request for Interim Review, para. 24.
[944] European Communities, Request for Interim Review, p. 16.

BCI deleted, as indicated **[***]**

27. Footnote 2672

6.90 The European Communities requests that the Panel change the figure of $43 million to $44 million in the penultimate sentence, because the assistance instruments listed on Exhibit US-41 (revised) (i.e. those listed as type CA, CA(T), or OTA) total $44,095,404.[945]

6.91 The United States makes no comment on the European Communities' request.

6.92 The Panel has reviewed the assistance instruments identified in Exhibit US-41 and concluded that the European Communities is correct that the total value of these instruments was $44,095,404. The Panel has therefore amended the penultimate sentence of the first paragraph of footnote 2672 of the Interim Report (now footnote 2800) to substitute "$44 million" for "$43 million".

28. Paragraph 7.1276

6.93 The European Communities requests the Panel to make findings as to whether the allocation of patent rights under NASA/DOD R&D contracts and agreements constitutes a financial contribution that confers a benefit within the meaning of Article 1 of the SCM Agreement. The European Communities understands that the Panel believes that such findings are unnecessary because the Panel has found that "the allocation of intellectual property rights under NASA and DOD contracts and agreement{s} is not specific to a 'group of enterprises or industries' within the meaning of Article 2 of the SCM Agreement". However, the European Communities believes that the completion of the Panel's evaluation as to the existence of a specific subsidy will promote the goal of prompt settlement of the dispute, in accordance with the objective articulated in Article 3.3 of the DSU.[946]

6.94 The United States objects to the European Communities' request. The United States observes that the Panel appears to have exercised judicial economy with regard to the issue referenced by the European Communities. The European Communities' interim review comment provides no reason to question the Panel's decision in this regard.[947]

6.95 The Panel declines to modify its Interim Report by making a finding that the allocation of patent rights under NASA/DOD R&D contracts and agreements constitutes a financial contribution that confers a benefit within the meaning of Article 1 of the SCM Agreement. As stated in paragraph 7.1294 of the Interim Report (now paragraph 7.1294), the Panel finds that assuming *arguendo* that the allocation of patent rights under NASA/DOD R&D contracts and agreements with Boeing involves a subsidy within the meaning of Article 1 of the SCM Agreement, the European Communities has not demonstrated that any such subsidy is specific within the meaning of Article 2 of the SCM Agreement. The Panel explains in footnote 2805 of the Interim Report (now footnote 2933) why it considers that it is appropriate to rely on this *arguendo* assumption. The European Communities does not assert, let alone explain, that the Panel erred in relying on this *arguendo* assumption nor does it advance any reasoning in support of its assertion that a finding that the allocation of patent rights under NASA/DOD R&D contracts and agreements constitutes a financial contribution that confers a benefit within the meaning of Article 1 of the SCM Agreement would promote a prompt settlement of this dispute.

6.96 The European Communities also requests the Panel to replace the term "intellectual property rights" in the first sentence with the term "patent rights". The European Communities believes that

[945] European Communities, Request for Interim Review, p. 16.
[946] European Communities, Request for Interim Review, p. 17.
[947] United States, Comments on the European Communities' Request for Interim Review, para. 25.

this substitution is necessary to align this sentence with the Panel's discussion of patent rights, specifically, in the remainder of Section 8(e)(i).[948]

6.97 The United States makes no comment on the European Communities' request.

6.98 The Panel agrees with the European Communities that in order to reflect correctly the subject matter of this section of the Report, "patent rights" should be substituted for "intellectual property rights" in the first sentence of paragraph 7.1276 of the Interim Report (now paragraph 7.1276).

29. Paragraphs 7.1309-7.1310

6.99 The European Communities requests that the Panel replace the words "intellectual property rights" with "data rights" in the first, third, and fourth sentences of paragraph 7.1309 of the Interim Report and in the sole sentence of paragraph 7.1310 of the Interim Report. In addition, the European Communities requests the Panel to replace the clause "intellectual property at issue arises" with the clause "data at issue arise" in the fourth sentence of paragraph 7.1309. The European Communities explains that these modifications in phrasing better align with: (i) the subject matter addressed in Section 8(e)(ii) – i.e. "Data rights and trade secrets"; (ii) the Panel's conclusion in paragraph 7.1311 regarding "the allocation of data rights under NASA/DOD R&D contracts and agreements"; and (iii) the Panel's intention, as stated in paragraph 7.1295, of addressing in these paragraphs "the question of whether the LERD and 'limited' government data rights treatment accorded to Boeing under the challenged programmes can be analysed and found to constitute a separate, additional 'financial contribution' ...".[949]

6.100 The United States objects to the European Communities' request. The United States submits that it does not appear that the Panel's findings in these paragraphs are intended to be limited solely to intellectual property protections in the form of data rights.[950]

6.101 The Panel declines to make the changes requested by the European Communities. Although paragraphs 7.1309-7.1310 of the Interim Report (now paragraphs 7.1309-7.1310) are part of a section of the Interim Report that specifically pertains to data rights, the reasoning in those paragraphs is applicable to any kind of intellectual property.

30. Paragraph 7.1431(d) and NASA row in table at paragraph 7.1433

6.102 The European Communities recalls that the Panel's conclusion at paragraph 7.1110 of the Interim Report with regard to the NASA R&D measures does not depend on the type of instrument at issue (i.e. whether procurement contract or Space Act Agreement). The European Communities submits that the Panel stated its conclusion at paragraph 7.1110 of the Interim Report as follows: "... the Panel finds that the payments and access to facilities, equipment and employees that NASA provided to Boeing through the eight aeronautics R&D programmes at issue constitute specific subsidies within the meaning of Articles 1 and 2 ...". Moreover, at paragraph 7.983, the Panel concluded: "In the case of NASA aeronautics R&D, we consider that the different types of instruments used do not shed very much light on the nature of the transactions". Accordingly, the European Communities requests that the Panel summarise its conclusions with respect to the NASA R&D measures at paragraph 7.1431(d) and in the NASA row of the table at paragraph 7.1433 without reference to the type of instrument at issue, consistent with the Panel's conclusion at paragraph 7.1110. Thus, the European Communities suggests that the Panel modify its summaries at paragraph 7.1431(d) and in the NASA row of the table at paragraph 7.1433 as follows: "the payments

[948] European Communities, Request for Interim Review, p. 17.
[949] European Communities, Request for Interim Review, p. 18.
[950] United States, Comments on the European Communities' Request for Interim Review, para. 26.

made to Boeing under the eight aeronautics R&D programmes at issue"; and "the access to government facilities, equipment and employees provided to Boeing under the eight aeronautics R&D programmes at issue".[951]

6.103 The United States objects to the European Communities' request. The United States submits that the evidence on the record and the Panel's findings do not support the blanket summary statement requested by the European Communities. The modification proposed by the European Communities would imply that the Panel's finding covers instruments not at issue in this case (and potentially new legal instruments that might be developed in the future) and with respect to which the Panel had not made any factual findings. The United States also observes, in accordance with its own comments on the Panel's Interim Report, that the Panel's finding with respect to Space Act Agreements actually covers only non-reimbursable Space Act Agreements. Thus, to the extent that the European Communities' revised text suggests that the Panel found reimbursable Space Act Agreements to confer a subsidy, that suggestion is inconsistent with the European Communities' own position.[952]

6.104 The Panel declines to make the changes requested by the European Communities. As stated in paragraph 7.943 of the Interim Report (now paragraph 7.944), the Panel's understanding is that the measures challenged by the European Communities are the payments and the free access to NASA facilities, equipment and employees that NASA provided to Boeing *through R&D contracts and agreements.* Elsewhere in its Interim Report the Panel also characterizes the measures at issue as payments made and access to facilities, equipment and employees provided under R&D contracts and agreements. While it is true that in several instances the Panel has referred to payments and access to facilities, equipment and employees provided through or under the R&D programmes at issue, the Panel considers that adding a reference to R&D contracts and agreements allows for a more precise definition of the measures at issue.

31. Paragraph 7.1433, State of Washington row in table

6.105 The European Communities request the Panel to correct a factual error, and change the total amount of the subsidy from the State of Washington and Municipalities therein from $74.5 million to $77.7 million. The European Communities notes that the Panel reached the following conclusions earlier in the report with respect to the amounts of each of the Washington State subsidies, which add up to $77.7 million:

- $13.8 million for the B&O tax reduction (*see* para. 7.301);
- $21.3 million for the B&O tax credit for preproduction development (*see* para. 7.301);
- $20.0 million for the B&O tax credit for computers (*see* para. 7.301);
- $1.1 million for the B&O tax credit for property taxes (*see* para. 7.301);
- $8.3 million for the sales and use tax exemptions for computers (*see* para. 7.301);
- $2.2 million for the City of Everett B&O tax reduction (*see* para. 7.353); and
- $11.0 million for the job training incentives (*see* para. 7.596).[953]

6.106 The United States makes no comment on the European Communities' request.

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[951] European Communities, Request for Interim Review, p. 19.
[952] United States, Comments on the European Communities' Request for Interim Review, para. 27.
[953] European Communities, Request for Interim Review, pp. 19-20.

6.107 The Panel accepts that the figure of $74,5 million for the total amount of Washington State subsidies in the table in paragraph 7.1433 of the Interim Report (now paragraph 7.1433) is incorrect and that the correct figure is $77.7 million. The Panel has therefore modified this table accordingly.

32. Paragraph 7.1595, footnote 3217

6.108 The European Communities requests that the Panel correct a factual error in footnote 3217 by changing the reference "until 2004" to "from 2004 until late 2006". According to the European Communities, Airbus marketed the Original A350 during the period 2004 - 2006, not "until 2004".[954]

6.109 The United States similarly requests the Panel to make a change to footnote 3217 to indicate that the Original A350 LCA family was marketed by Airbus in 2004 and 2005.[955] The European Communities, in its comments on the United States' request, asserts that the United States' request is factually incorrect. In this regard, the European Communities refers to evidence that it considers demonstrates that Airbus, in fact, marketed the Original A350 LCA family from 2004 to 2006.[956] The European Communities therefore suggests the following revisions to the wording proposed by the United States:

> "The Original A350 LCA family was marketed by Airbus ~~until~~ from 2004 through 2006, but ~~has since been~~ was replaced by the A350XWB family in December 2006, when the A350XWB family was officially launched."

6.110 The European Communities treats the "Original A350" as including the "initial concept of the A350 family" that Airbus began marketing in December 2004.[957] This design originally retained the A330 fuselage, while having new composite wings. However, by April 2005, the design had been modified to include a composite aft fuselage section.[958] The United States refers to the successive iterations of the A350 which were marketed prior to the redesign of the A350 in April 2005 as the "A350 Initial" and appears to treat the European Communities' reference to the "Original A350" as the version comprising a composite aft fuselage section that was redesigned in April 2005.[959] Despite the differences in terminology used by the parties, it appears from the evidence that the earliest versions of the A350 (whether known as the "Original A350" or "A350 Initial") were marketed from December 2004. As for the time at which Airbus ceased marketing the Original A350 (i.e. the versions of the A350 preceding the A350XWB), the European Communities states in its First Written Submission that Airbus set aside marketing its Original A350 family in July 2006 and began marketing the A350XWB.[960]

6.111 The Panel considers that it is appropriate to revise footnote 3217 of the Interim Report (now footnote 3345 of the Report) to indicate that the Original A350 LCA family was marketed by Airbus from December 2004 through 2006, but that it was subsequently replaced by the A350XWB family, which Airbus began marketing in July 2006. The Panel has also revised the third to last sentence of paragraph 7.1777 of the Interim Report (now paragraph 7.1777 of the Report) to clarify that the Original A350 programme was officially launched in October 2005, notwithstanding that other iterations of the A350 had been marketed as early as December 2004.

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[954] European Communities, Request for Interim Review, p. 21.

[955] United States, Request for Interim Review, para. 6.

[956] European Communities, Comments on United States' Request for Interim Review, p. 2.

[957] See European Communities' first written submission, para. 1174.

[958] See e.g. Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 102.

[959] See e.g. United States' first written submission, para. 927.

[960] European Communities' first written submission, para. 1174. This is borne out by other evidence; see e.g. a July 2006 press release announcing that Singapore Airlines had signed a letter of intent to purchase 20 A350XWB-900s, as well as 20 options, Exhibit EC-1157, p. 219.

BCI deleted, as indicated **[***]**

33. Paragraph 7.1606

6.112 The European Communities requests that the Panel add a parenthetical clarification at the end of the last sentence of paragraph 7.1606 so that the paragraph would read as follows:

> "The European Communities estimates that the total amount of these subsidies that benefited Boeing's LCA division between 1989 and 2006 was $19.1 billion. The European Communities also estimates that the total amount of these subsidies will continue to be very large. To that end, the European Communities estimates that Boeing will receive approximately $4.6 billion in subsidies between 2007 and 2024 (excluding FSC/ETI federal tax exemptions/exclusions and aeronautics R&D support provided by NASA, DOD and DOC).[3243]"

6.113 The European Communities' explanation for the suggested addition is as follows. The preceding paragraph of the Interim Report (paragraph 7.1605) lists the 11 categories of subsidies that the European Communities argues have affected Boeing's pricing behaviour. The European Communities argues that, in this context, as presently drafted, paragraph 7.1606 could be read to suggest that the $4.6 billion estimate for 2007 – 2024 includes amounts representing the future value of FSC/ETI federal tax exemptions/exclusions and aeronautics R&D subsidies provided by NASA, DOD and DOC, when it does not in fact do so.[961]

6.114 The United States objects to the European Communities' comment and submits that the Interim Report accurately reflects the argument and evidence submitted by the European Communities.[962]

6.115 The Panel considers that, in order to address the European Communities' comments, it is appropriate to amend the second sentence of paragraph 7.1606 of the Interim Report (now paragraph 7.1606) to clarify the categories of subsidies that comprise the $4.6 billion in subsidies that the European Communities estimates that Boeing will receive between 2007 and 2024.

34. Paragraph 7.1701

6.116 The European Communities requests that the Panel expand its serious prejudice evaluation to include DOD assistance instruments funded through any of the challenged RDT&E project elements, not just those funded through the ManTech and DUS&T project elements.[963] The European Communities considers that there is evidence on the record to enable the Panel to determine which transactions between DOD and Boeing under the RDT&E programmes (other than ManTech and DUS&T) funded assistance instruments with Boeing. The European Communities provides a tabular summary of information said to be based on Exhibits US-41 (revised), US-1267 and the United States' response to Question 213 which, according to the European Communities, makes it clear that several DOD RDT&E project elements, other than the ManTech and DUS&T programmes, funded assistance instruments with Boeing.[964]

6.117 On the basis of the foregoing, the European Communities requests that the Panel state that it includes in its serious prejudice evaluation "*any of* the challenged RDT&E PEs *to the extent that* the PE has funded assistance instruments with Boeing."[965] The European Communities further requests that the Panel summarize its subsidy findings in paragraph 7.1701 by making the following addition

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[961] European Communities, Request for Interim Review, p. 21.
[962] United States, Comments on the European Communities' Request for Interim Review, para. 28.
[963] European Communities, Request for Interim Review, p. 22.
[964] European Communities, Request for Interim Review, pp. 22-24 and Annex A thereto.
[965] European Communities, Request for Interim Review, p. 24.

after the third sentence in that paragraph: "The Panel has also recognized the link between "assistance instruments" and "dual use" technologies with benefit or potential benefit to contractors' commercial operations" (to be followed by a footnote cross-reference to paragraph 7.1159 of the Interim Report). The European Communities has also compiled evidence of what it considers to be the "dual-use nature of the R&D at issue" under each assistance instrument in Annex A to its Request for Interim Review, "{s}hould the Panel require additional assurance that assistance instruments under PEs other than the ManTech and DUS&T programmes related to dual-use R&D."[966]

6.118 Finally, the European Communities requests the Panel to take this comment into account throughout its serious prejudice analysis. The European Communities suggests, for example, that the Panel maintain its description of the structure and design of the ManTech and DUS&T programmes in the serious prejudice section of the Interim Report, but that it clarify that these two DOD programmes are examples of RDT&E programmes that have funded assistance instruments with Boeing.[967]

6.119 The United States objects to the European Communities' comments and considers that the Interim Report accurately and fully reflects the extent of the Panel's findings and the scope of the European Communities' challenge.[968] The United States argues that the European Communities has provided no basis for the Panel to consider that any of the instruments that it references in its comment on paragraph 7.1701, except to the extent funded through ManTech and DUS&T, should be included in the Panel's serious prejudice analysis or its findings as to adverse effects.[969] The United States further identifies what it considers to be the following flaws with the European Communities' proposal.

6.120 First, the United States asserts that the European Communities attempts to establish for the first time in its comments on Interim Review that certain assistance agreements funded "dual use" research. According to the United States, the evidence on which the European Communities relies to make this argument has been on the record for years and it is not appropriate for the European Communities to seek to have the Panel make additional findings based on argumentation that the European Communities had an opportunity to present, but did not present, during the panel proceedings.[970] Indeed, the United States considers that the European Communities' request that the Panel consider new arguments on these factual issues goes beyond the scope of interim review contemplated by Article 15.2, which is limited to review of "precise aspects" of the interim report.[971]

6.121 Second, the United States says that it has never indicated that the subject matter of the R&D (in this case, dual use) determines whether DOD enters into assistance instruments with Boeing or any other entity; rather, it is the nature of the government's interest in or need for the research that determines the form of instrument.[972] In other words, according to the United States, the mere fact that research is funded through an assistance instrument does not support an inference that the research has civil applications. The United States refers to Annex A to the European Communities' Request for Interim Review, which purports to compile evidence of the "dual-use" R&D conducted under the various assistance instruments. According to the United States, where for several of the assistance instruments the European Communities indicates only "N/A", it effectively concedes that all research funded by assistance instruments under the 23 challenged RTD&E programmes was *not* necessarily dual-use.

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[966] European Communities, Request for Interim Review, p. 24.
[967] European Communities, Request for Interim Review, p. 25.
[968] United States, Comments on European Communities' Request for Interim Review, para. 29.
[969] United States, Comments on European Communities' Request for Interim Review, para. 35.
[970] United States, Comments on European Communities' Request for Interim Review, para. 30.
[971] United States, Comments on European Communities' Request for Interim Review, para. 30.
[972] United States, Comments on European Communities' Request for Interim Review, para. 31, referring to United States' response to question 192, para. 235.

6.122 Third, the United States argues that the European Communities' listing of PE numbers that it considers to have funded dual-use research is based on the fact that those programme elements funded assistance instruments. According to the United States, this conclusion would be valid only if all assistance instruments funded dual use aeronautics RDT&E activities, which they do not.[973] Moreover the United States objects to the European Communities' inclusion in its table of project elements that funded assistance instruments on the record project elements that are not covered by the terms of reference of the Panel. According to the United States, the European Communities has in any case failed to provide any basis for the Panel to consider that these project elements funded dual-use technology.[974]

6.123 Finally, the United States argues that repetition in this section of the Interim Report of the statement regarding the link between assistance instruments and dual-use technologies, which was made in the context of the subsidy evaluation, would create the misimpression that the Panel's findings apply to all assistance instruments without regard to the subject matter of the research. The United States does not understand this to be the extent of the Panels' finding.[975]

6.124 The European Communities' comment appears to rest on one or both of the following premises; namely (i) that the Panel erroneously concluded that only the ManTech and DUS&T programmes under the RDT&E Program funded assistance instruments with Boeing; and (ii) that there is insufficient evidence on the record to enable the Panel to determine which transactions between DOD and Boeing under the RDT&E programmes are procurement contracts and which are assistance instruments. However, the Panel is aware that assistance instruments were funded through RDT&E programmes other than ManTech and DUS&T, and of the evidence on record linking the assistance instruments on record to the RDT&E programmes that funded them. The Panel has revised paragraph 7.1701 of the Interim Report (now paragraph 7.1701) to further clarify that its serious prejudice evaluation includes assistance instruments funded under the ManTech and DUS&T programmes as well as under the 21 other programmes under the RDT&E Program. The revisions also further clarify that, as part of our evaluation, the European Communities has not advanced sufficient argument and evidence that would enable the Panel to assess the effects of assistance instruments funded by programmes other than the ManTech and DUS&T programmes, as distinct from the effects of those RDT&E *programmes* as a whole (which involve funding in the form of both procurement contracts and assistance instruments). The Panel declines the European Communities' request to "summarize its subsidy findings" in paragraph 7.1701 by making the requested addition after the third sentence in that paragraph because the European Communities has failed to advance any explanation as to why it seeks this addition and the Panel does not consider that the requested addition is necessary.

35. Paragraph 7.1701, footnote 3458

6.125 Related to the above issue, the European Communities requests that the Panel delete footnote 3458.[976] According to the European Communities, the question whether a given RDT&E programme funds exclusively assistance agreements or exclusively procurement contracts is not instrumental to the Panel's analysis. The European Communities recalls that in paragraph 7.1210 of the Interim Report, the Panel finds that assistance instruments under any of the challenged RDT&E programmes are specific subsidies to Boeing, regardless of whether the programmes also funded procurement contracts.

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[973] United States Comments on European Communities' Request for Interim Review, para. 32.
[974] United States Comment on European Communities' Request for Interim Review, para. 34.
[975] United States Comments on European Communities' Request for Interim Review, para. 36.
[976] European Communities, Request for Interim Review, p. 25.

6.126 The United States objects to the European Communities' request. The United States notes that the European Communities does not suggest that the footnote is inaccurate, and also that, while the Panel's inability to conclude that particular RDT&E programmes funded entirely procurement contracts or entirely assistance instruments is not instrumental to its analysis, it was nevertheless an important element in its conclusion that it could not put a value on the funding challenged by the European communities.[977]

6.127 The revisions that the Panel has made to paragraph 7.1701 of the Interim Report (now paragraph 7.1701) have resulted in a deletion of what was previously footnote 3458.

36. Paragraphs 7.1786-7.1787, footnote 3596 and paragraphs 7.1790-7.1794, 7.1854(a) and 8.3(a)(i)

6.128 The European Communities requests the Panel to modify its finding regarding the sales campaigns that Airbus lost during 2004 – 2006 due to the effects of the R&D subsidies, and to modify its consequential findings regarding threat of displacement or impedance.[978]

6.129 More specifically, the European Communities requests the Panel to add Boeing's 787 sale to Japan Airlines as a significant lost sale, which it argues turned at least in part on the technological features and early availability of the 787.[979] The European Communities notes that, while the Panel identified the Japan Airlines sales campaign as one of the campaigns covered by the European Communities' claim, it did not include this campaign in either its list of sales campaigns where "the performance characteristics of the 787 and/or its scheduled entry into service in 2008 appear to have been the decisive factors in the outcome" or in its list of sales campaigns in which other factors "played a significant part in the Boeing sale."[980] The European Communities recalls its arguments that, in addition to price concerns, the Japan Airlines campaign also turned on the technological capabilities and earlier availability of the 787.[981] Should the Panel agree to this modification, the European Communities further requests that the Panel modify its threat of displacement findings in paragraphs 7.1790-7.1794 to include the third country market of Japan.[982]

6.130 The United States objects to the European Communities' request. The United States submits that the Panel's lost sales finding in the main body of the Interim Report is limited to the Qantas, Ethiopian and Icelandair campaigns in 2005 and the Kenya Airways campaign in 2006.[983] The United States notes that the threat of displacement findings do not cover Japan, which suggests that the Panel did not intend to find that the 2004 Japan Airlines campaign represents a lost sale that is the effect of the aeronautics R&D subsidies.[984]

6.131 The Panel has revised footnote 3596 of the Interim Report (now footnote 3725 of the Report) to include a specific reference to the Japan Airlines sales campaign. The Panel has considered the evidence to which the European Communities refers in support of its argument that, in addition to price concerns, the Japan Airlines campaign also turned on the technological capabilities and earlier availability of the 787. The Panel is not persuaded by this evidence in the light of the evidence that

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[977] United States, Comments on European Communities' Request for Interim Review, para. 37.
[978] European Communities, Request for Interim Review, p. 26.
[979] European Communities, Request for Interim Review, p. 26.
[980] European Communities, Request for Interim Review, p. 26.
[981] Referring to European Communities' second written submission, HSBI Appendix, paras. 28-33 and the evidence cited therein.
[982] European Communities, Request for Interim Review, p. 26.
[983] United States, Comments on the European Communities' Request for Interim Review, para. 38.
[984] United States, Comments on the European Communities' Request for Interim Review, para. 38.

points to other factors having played a significant part in the Boeing sale. These other factors include Boeing's relationship with Japan Airlines[985], and the routes to be serviced and range of the aircraft.[986]

37. Paragraph 7.1788

6.132 The European Communities requests that the Panel clarify its finding related to the Qantas campaign (pertaining to lost sales of Airbus Original A350s) to include a finding of lost sales of Airbus A330s.[987] The European Communities submits that the evidence demonstrates that Airbus was offering Qantas both Original A350s and A330s in that campaign.[988]

6.133 The United States makes no comment on the European Communities' request.

6.134 In the Panel's view, the evidence demonstrates that the Qantas sales campaign was, in the final analysis, a choice between the 787 and the Original A350.[989] The Panel therefore declines the European Communities' request to include a finding of lost sales of Airbus A330s.

38. Paragraph 7.1810

6.135 The European Communities requests a modification of the statement in paragraph 7.1810 of the Interim Report:

> "In our view, precisely because the FSC/ETI subsidies are contingent on Boeing making export sales, we are entitled to determine, absent reliable evidence to the contrary, that by their very nature, they will have trade distortive effects."

6.136 The European Communities requests the Panel to clarify that this inference is not the only evidentiary basis for its finding that FSC/ETI and B&O subsidies caused adverse effects.[990] The European Communities refers to paragraphs 7.1806-7.1807, 7.1811 and 7.1817-7.1823 as evidentiary bases which appear to fully support the Panel's findings of adverse effects, even in the absence of any inference to be drawn from the fact that the FSC/ETI subsidies are prohibited subsidies.[991]

6.137 The United States objects to the European Communities' request. According to the United States, the rationale behind the European Communities' request (namely, that the export contingency inherent in the FSC/ETI subsidies is not the only evidentiary basis for the Panel's finding that FSC/ETI and B&O subsidies caused adverse effects) is wrong.[992]

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[985] "Year End Dividends; Continental and JAL orders bring establishment blessings to the 7E7," Aviation Week and Space Technology, 3 January 2005, Exhibit EC-1275 (noting that Japan Airlines is not an Airbus customer and that Japanese industry was supplying the composite wing and much of the composite fuselage structure for the 7E7); "Sizing Twin Aisles," Aviation Week and Space Technology, 17 May 2004, Exhibit EC-1276 (suggesting that following its acquisition of Japan Air Systems, Japan Airlines had decided to streamline its fleet by flying a largely Boeing fleet powered by Pratt and GE engines).

[986] "Year End Dividends; Continental and JAL orders bring establishment blessings to the 7E7," Aviation Week and Space Technology, 3 January 2005, Exhibit EC-1275 (noting that Boeing had adjusted the performance characteristics of the 7E7 by creating the 7E7-3 to meet the particular demands of the Japanese market).

[987] European Communities, Request for Interim Review, p. 26.

[988] European Communities, Request for Interim Review, pp. 26-27.

[989] Notwithstanding that Airbus may have initially proposed including some A330s in its offer. See, e.g. Dream Deal for Boeing, Boeing/Airbus Press Reports, Exhibit EC-1157, pp. 467-469, Airbus Document, 24 January 2006, Exhibit EC-900 HSBI, Airbus Document, undated, Exhibit EC-903 HSBI.

[990] European Communities, Request for Interim Review, p. 27.

[991] European Communities, Request for Interim Review, p. 27.

[992] United States' Comments on European Communities' Request for Interim Review, para. 39.

6.138 The Panel has amended paragraph 7.1810 of the Interim Report (now paragraph 7.1810 of the Report) in response to the European Communities' request.

39. Paragraph 7.1814, footnote 3637

6.139 The United States requests that the Panel add additional references to the United States' submissions in order to fully reflect the relevant U.S. arguments concerning the size and relevance of foreign sales corporate/extraterritorial income tax treatment.[993]

6.140 The European Communities does not object to the requested U.S. additions, but only on the condition that the Panel likewise add a number of references to the relevant arguments of the European Communities on the same topic. In particular, the European Communities requests that the Panel add the following at the end of footnote 3637, immediately after the additional U.S. references:

> "The European Communities disagrees with the US position on the lack of significance of a subsidy of a relatively low magnitude in the LCA market. European Communities' response to question 94, paras. 496-513; European Communities' comments on United States' response to questions 94 and 99, paras. 332-336, 375-379; and European Communities' comments on United States' response to question 389, para. 403."

6.141 The Panel has amended the text of footnote 3637 of the Interim Report (now footnote 3767 of the Report) to include references to arguments made by both the United States and European Communities on the issue of whether the amounts or magnitudes of the FSC/ETI and B&O tax subsidies are so small that they are unlikely to have affected Boeing's LCA prices or the outcome of LCA sales campaigns and thus are unlikely to have caused Airbus to lose sales or to win sales at suppressed prices. The Panel observes that these arguments should be distinguished from the parties' arguments on a related but separate issue; namely, the degree of price suppression or lost sales that would constitute "significant" price suppression or "significant" lost sales for the purposes of Article 6.3(c). The Panel has amended footnote 3637 to reflect only the arguments pertaining to the former issue as that is the issue that is the focus of the Panel's discussion in paragraph 7.1814.

40. Paragraph 7.1818, footnote 3646

6.142 The European Communities requests the Panel to make additional evidentiary references to further support its finding regarding the relevance of switching costs.[994]

6.143 The United States makes no comment on the European Communities' request.

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[993] United States, Request for Interim Review, para. 7. In particular, the United States requests that the following references to the United States' arguments be added: United States' second written submission, para. 175 and footnote 272; United States comment on European Communities' response to question 229, para. 420; United States' comment on European Communities' response to question 269, para. 469; United States' comment on European Communities' response to question 94, paras. 348-352; United States' response to question 94, para. 241.

[994] European Communities, Request for Interim Review, p. 27. The European Communities suggests the particular references from exhibits filed by the European Communities (Exhibit EC-10, para. 97, Exhibit EC-11, (BCI), para. 53, Exhibit EC-4, paras. 6, 28, 35, 63-68, Appendix B.4), as well as from its submissions (European Communities' first written submission, para. 1212, European Communities' second written submission, paras. 776-777, European Communities' response to question 95, paras. 514-518, European Communities' response to question 307, paras. 787-792). It also argues that the United States does not dispute the relevance of switching costs, referring in this regard to various parts of the United States' submissions (United States' second written submission, HSBI Appendix, paras. 36-37, United States' response to question 95, para. 243, United States' comment on European Communities' response to question 95, para. 355).

6.144 Although the European Communities has not explained why it requests the Panel to make additional evidentiary references to support the Panel's statement regarding the relevance of switching costs, the Panel has revised footnote 3646 of the Interim Report (now footnote 3776 of the Report) to make such additional evidentiary references as it considers appropriate in the context of its statement in paragraph 7.1818 of the Interim Report (now paragraph 7.1818 of the Report) regarding switching costs.

41. Paragraph 7.1822

6.145 The European Communities requests the Panel to add to its explanation in paragraph 7.1822 (now paragraph 7.1822 of the Report) as to why it is reasonable to infer that the effects of the subsidies on Airbus' prices and sales could be "significant" in the sense used in Article 6.3 of the SCM Agreement, that this conclusion is unaffected by the various non-attribution factors that the United States alleged affected the outcomes of the various LCA sales campaigns.[995] The European Communities submits that, applying the same logic that was applied by the Panel in paragraph 7.1694 (where it recognizes that price and non-price factors can be offset by price concessions) and paragraph 7.1792 (now paragraphs 7.1694 and 7.1792 of the Report, respectively), the Panel could usefully add a finding that any possible impact of the factors that the United States mentioned on the prices of Airbus LCA does not diminish the effects of the FSC/ETI and B&O subsidies that the Panel found to exist.[996]

6.146 The United States objects to the European Communities' request on the basis that the Panel addressed non-attribution factors in paragraph 7.1819 of the Interim Report and that it understands the finding in paragraph 7.1822 to be one with respect to the "significance" of the effects.[997]

6.147 The Panel declines to make the additions requested by the European Communities. The European Communities has not explained why the requested additions are necessary or useful.

42. Appendix VII.F.1, paragraphs 3-10

6.148 The European Communities notes that the Panel's discussion of composites technologies in parasgraphs 3-10 of Appendix VII.F.1 does not include any discussion of the application of composites technologies on the 787, while the discussion of each of the other technology areas at issue in paragraphs 11-18 of Appendix VII.F.1 does include a discussion of the application of that technology on the 787.[998] The European Communities suggests, for the sake of completeness, that the Panel insert a new paragraph after paragraph 10 that states: "A discussion of the application of composites technology on the 787 is included as part of the discussion in Section C of this Appendix."[999]

6.149 The United States makes no comment on the European Communities' request.

6.150 For the sake of completeness, the Panel has inserted a new paragraph after paragraph 10 that states: "A discussion of the application of composites technology on the 787 is included as part of the discussion in Section C of this Appendix."

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[995] European Communities, Request for Interim Review, p. 28.
[996] European Communities, Request for Interim Review, p. 28.
[997] United States, Comments on European Communities' Request for Interim Review, para. 39.
[998] European Communities, Request for Interim Review, p. 28.
[999] European Communities, Request for Interim Review, p. 28.

BCI deleted, as indicated **[***]**

43. Appendix VII.F.2, paragraph 74

6.151 The European Communities requests the Panel to expand its explanation in the last sentence of paragraph 74 which explains that "the evidence suggests that the relationship between lower development costs and LCA prices is less direct than is suggested by Professor Cabral."[1000] The European Communities believes that the Panel meant to refer to "costs" more generally, rather than "development costs" specifically ("development costs" usually being used to define the specific development costs for an aircraft programme, rather than general R&D costs). More importantly, the European Communities requests that, to improve the clarity of the Report, the Panel identify more precisely how it considers the relationship to be "less direct".[1001]

6.152 The United States objects to the European Communities' request. The United States indicates that it understands that the Panel meant to distinguish between "costs" more generally and the R&D or development costs at issue in paragraph 74.[1002]

6.153 The Panel has revised paragraph 74 to clarify that in the last sentence it meant to refer to costs in a general sense as distinguished from the development costs of a specific LCA programme and to clarify more precisely why it considers that the relationship between costs and LCA prices is less direct than is suggested by Professor Cabral.

VII. FINDINGS

A. INTRODUCTION

7.1 In this dispute, the European Communities[1003] claims that the United States has acted, and continues to act, inconsistently with the SCM Agreement by providing prohibited or actionable subsidies to The Boeing Company and the McDonnell Douglas Corporation prior to its merger with Boeing (which the European Communities terms the "US LCA industry").[1004] The European Communities argues that these subsidies have been provided or are being provided by the States of Washington, Kansas and Illinois and municipalities in those States and by the U.S. Government.

7.2 Regarding the State of Washington and municipalities therein, the European Communities challenges: (i) various tax rate reductions, tax credits and tax exemptions provided for in a law adopted by the State of Washington in June 2003 to retain and attract the aerospace industry to Washington State; (ii) tax rate reductions adopted by the City of Everett; and (iii) a series of tax- and non-tax incentives provided for in the Project Olympus Master Site Agreement, an agreement concluded between Boeing and the State of Washington and municipalities in December 2003.

7.3 Regarding the State of Kansas and municipalities therein, the European Communities challenges: (i) property and sales tax breaks provided by the City of Wichita to large civil aircraft component production facilities through the issuance of industrial revenue bonds; and (ii) interest payments by the State of Kansas on Kansas State Development Bonds, which the

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[1000] European Communities, Request for Interim Review, p. 30.
[1001] European Communities, Request for Interim Review, p. 30.
[1002] United States, Comments on European Communities' Request for Review, para. 41.
[1003] On 1 December 2009, the *Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community* (done at Lisbon, 13 December 2007) entered into force. On 29 November 2009, the WTO received a Verbal Note (WT/L/779) from the Council of the European Union and the Commission of the European Communities stating that, by virtue of the Treaty of Lisbon, as of 1 December 2009, the European Union replaces and succeeds the European Community.
[1004] The European Communities generally uses the term "Boeing" to include McDonnell Douglas unless otherwise stated, and we will follow the same approach in this Report.

European Communities alleges will be used to facilitate production of a portion of the fuselage of the Boeing 787.

7.4 Regarding the State of Illinois and municipalities therein, the European Communities challenges certain measures whereby the State of Illinois, the City of Chicago and Cook County have reimbursed or paid certain costs related to the relocation of Boeing's headquarters or have provided certain tax credits or tax abatements in connection with that relocation.

7.5 Regarding the U.S. Government, the European Communities challenges: (i) payments and access to government facilities, equipment and employees provided to Boeing pursuant to R&D contracts and agreements entered into under eight National Aeronautics and Space Administration (NASA) aeronautics R&D programmes; (ii) payments and access to government facilities, equipment and employees provided to Boeing pursuant to R&D contracts and agreements entered into under 23 Department of Defense (DOD) RDT&E programmes; (iii) payments and access to government facilities, equipment and employees provided to joint ventures / consortia in which Boeing participated under the Department of Commerce's Advanced Technology Program; (iv) the allocation of intellectual property rights under NASA and DOD R&D contracts and agreements entered into with Boeing; (v) the reimbursement of Boeing's independent R&D and bid and proposal expenses under NASA and DOD R&D contracts with Boeing; (vi) the provision by the Department of Labor of grants to help train workers for the Boeing 787; and (vii) tax advantages under legislation relating to foreign sales corporations and the exclusion of extraterritorial income.

7.6 The claims of the European Communities with respect to the above-mentioned measures fall into two categories. First, the European Communities claims that two of the alleged subsidies, namely the tax incentives provided by the State of Washington under the legislation adopted in 2003 and the tax breaks provided by the U.S. Federal Government pursuant to legislation concerning foreign sales corporations and exclusion of extraterritorial income, are prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement. Second, the European Communities claims that all of the subsidies are actionable under the SCM Agreement and that by using these subsidies the United States has caused and continues to cause adverse effects to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement.

7.7 The European Communities requests that the Panel recommend that the United States withdraw the prohibited subsidies without delay, as required by Article 4.7 of the SCM Agreement, and take appropriate steps to remove the adverse effects or withdraw the actionable subsidies, as required by Article 7.8 of the SCM Agreement.

7.8 The United States requests the Panel to find that the United States has acted consistently with its obligations under the SCM Agreement and to deny the relief requested by the European Communities.

7.9 This Report is organized as follows. Section VII. B sets out the relevant principles regarding the Panel's function, treaty interpretation, and the burden of proof. Section VII. C contains the text of decisions rendered by the Panel in July 2007 on certain preliminary matters. In section VII. D, the Panel examines whether the measures challenged by the European Communities constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement.[1005] The Panel then turns to

[1005] Section VII. D of this Report generally addresses the measures in the same order in which they are addressed in the European Communities' first and second written submissions. In addition, the Panel has generally addressed these measures under the same sub-headings used by the European Communities in its submissions. Our adoption of the terminology used by the European Communities' in its sub-headings is for convenience only, does not necessarily reflect any view on the part of the Panel, and does not prejudge any disputed factual or legal issues.

an examination of whether two of the challenged measures are prohibited under Article 3 of the SCM Agreement, in section VII: E. With respect to those measures the Panel finds to be specific subsidies, the Panel addresses in section VII. F the European Communities' claims that the United States, through the use of those subsidies, causes adverse effects to the European Communities' interests within the meaning of Article 5(c) of the SCM Agreement. We set forth our conclusions and recommendation in section VIII.

B. FUNCTION OF THE PANEL, TREATY INTERPRETATION AND BURDEN OF PROOF

1. Function of the Panel

7.10 Article 11 of the DSU provides that the function of WTO panels is to make an "objective assessment" of the matter, including an objective assessment of the facts, and the applicability of and conformity with the relevant covered agreements, and to "make such other findings as will assist the DSB in making the recommendations or in giving the ruling provided for in the covered agreements".

2. Treaty interpretation

7.11 Article 3.2 of the DSU provides that Members recognise that the dispute settlement system serves to clarify the provisions of the covered agreements "in accordance with customary rules of interpretation of public international law". It is well established that the principles codified in Articles 31 and 32 of the Vienna Convention on the Law of Treaties (the "Vienna Convention")[1006] are such customary rules of interpretation of public international law. They provide as follows:

> "ARTICLE 31
>
> *General rule of interpretation*
>
> 1. A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose.
>
> 2. The context for the purpose of the interpretation of a treaty shall comprise, in addition to the text, including its preamble and annexes:
>
> (a) any agreement relating to the treaty which was made between all the parties in connexion with the conclusion of the treaty;
>
> (b) any instrument which was made by one or more parties in connexion with the conclusion of the treaty and accepted by the other parties as an instrument related to the treaty.
>
> 3. There shall be taken into account together with the context:
>
> (a) any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions;
>
> (b) any subsequent practice in the application of the treaty which establishes the agreement of the parties regarding its interpretation;

[1006] Done at Vienna, 23 May 1969, 1155 United Nations Treaty Series 331 (1980); 8 *International Legal Materials* 679 (1969).

BCI deleted, as indicated **[***]**

> (c) any relevant rules of international law applicable in the relations between the parties.
>
> 4. A special meaning shall be given to a term if it is established that the parties so intended.
>
> ARTICLE 32
>
> *Supplementary means of interpretation*
>
> Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31:
>
> (a) leaves the meaning ambiguous or obscure; or
> (b) leads to a result which is manifestly absurd or unreasonable."

3. Burden of proof

7.12 We have kept in mind the general principles applicable to burden of proof in WTO dispute settlement, which require that a party claiming a violation of a provision of a WTO Agreement by another Member must assert and prove its claim.[1007] In this dispute, the European Communities thus bears the burden of demonstrating that the disputed measures are specific subsidies, and in some cases export subsidies, and that through the use of those subsidies, the United States causes adverse effects to the European Communities' interests. It is generally for each party asserting a fact to provide proof thereof.[1008] Therefore, it is also for the United States to provide evidence for the facts which it asserts.

7.13 We have also kept in mind that a prima facie case is one which, in the absence of effective refutation by the other party, requires a panel, as a matter of law, to rule in favour of the party presenting the prima facie case.[1009] Finally, we recall that the Appellate Body has also stated that "{a} complaining party may not simply submit evidence and expect the panel to divine from it a claim of WTO-inconsistency. Nor may a complaining party simply allege facts without relating them to its legal arguments".[1010] The normal international legal standards governing the discharge of the burden of proof unquestionably apply to the WTO dispute settlement procedures as an important element of its functions concerning dispute resolution under the rule of law and due process.

C. PRELIMINARY MATTERS

1. Decision of the Panel on requests for enhanced third party rights[1011]

7.14 On 21 December 2006, Brazil requested the Panel to grant it certain "enhanced" third party rights in this proceeding, including the right: (1) "to attend the entirety of all substantive meetings of the Panel with the parties"; (2) "to present oral statements and oral observations at the substantive meetings of the Panel with the parties"; (3) "to receive copies of all submissions to the Panel, including answers to the questions posed by the Panel or the parties"; and (4) "to review and comment on the interim Panel Report, in particular the summary of Brazil's arguments in the draft

[1007] Appellate Body Report, *US – Wool Shirts and Blouses*, p. 14.
[1008] Appellate Body Report, *US – Wool Shirts and Blouses*, p. 14.
[1009] Appellate Body Report, *EC – Hormones*, para. 104.
[1010] Appellate Body Report, *US – Gambling*, para. 140.
[1011] The decision reproduced in paras. 7.14-7.18 was originally transmitted to the parties and third parties on 30 July 2007.

descriptive part of the Panel report". Brazil submits that it has a significant economic interest in the aircraft sector, and that any findings concerning the relevant provisions of the SCM Agreement in relation to the aircraft sector are necessarily of direct and substantial economic interest to Brazil. According to Brazil, granting its request would not lead to any blurring of the distinction between the rights of parties and those of third parties. On 22 December 2006, Canada requested the Panel to grant it any enhanced third party rights granted to Brazil. On 9 February 2007, the Panel received comments from both parties, opposing the requests for enhanced third party rights.

7.15 On 23 February 2007, the Panel informed the parties and third parties that it had decided not to grant enhanced third party rights to any third party in this proceeding. The Panel indicated that it would issue its reasons in due course. The Panel's reasons for declining Brazil's request, and the conditional request of Canada, are as follows.

7.16 The DSU establishes the rights of third parties in panel proceedings in paragraphs 2 and 3 of Article 10 of the DSU and paragraph 6 of Appendix 3 to the DSU. Under these provisions, third parties have the right to receive the submissions made by the parties up to the first meeting of the panel, to make submissions to the panel, to present their views during a session of the first substantive meeting of the panel set aside for that purpose, and to be present during the entirety of such a session.[1012] It is well-established that panels have the discretion to grant additional rights to third parties, subject to the requirements of due process and the need to guard against an inappropriate blurring of the distinction drawn in the DSU between the rights of parties and those of third parties.[1013] However, all third parties in a panel proceeding may be presumed to have a "substantial interest" in the matter before the panel[1014], and additional third party rights have so far been granted in panel proceedings for specific reasons only.[1015] Previous panels have granted enhanced third party rights on the basis of, *inter alia*, the significant economic effect of the measures at issue on certain third parties[1016], the importance of trade in the product at issue to certain third parties[1017], the significant trade policy impact that the outcome of the case could have on third parties maintaining measures similar to the measures at issue[1018], at least one of the parties agreeing that enhanced third party rights should be granted[1019], claims that the measures at issue derived from an international treaty to which certain third parties were parties[1020], third parties having previously been granted enhanced rights in related panel proceedings[1021], and certain practical considerations arising from a third party's involvement as a party in a parallel panel proceeding.[1022]

[1012] We also note that, in accordance with Article 10.4 of the DSU, nothing precludes a Member participating as a third party in a panel proceeding from requesting the establishment of another panel to examine the measures at issue.

[1013] Panel Reports, *EC – Export Subsidies on Sugar*, para. 2.7; Panel Report, *US – Upland Cotton*, Annex L-1.7, para. 9; Panel Report, *EC – Tariff Preferences*, Annex A, para. 7; Appellate Body Report, *US – 1916 Act*, para. 150; Panel Reports, *US – 1916 Act*, para. 6.32; Appellate Body Report, *EC – Hormones*, para. 154; Panel Reports, *EC – Bananas III*, para. 7.9.

[1014] Article 10.2 of the DSU indicates that the term "third party" is used throughout the DSU to refer to a Member that has "a substantial interest" in a matter before a panel, and which has notified its interest to the DSB.

[1015] Panel Reports, *US – 1916 Act*, para. 6.33.

[1016] Panel Reports, *EC – Bananas III*, para. 7.8; Panel Report, *EC – Tariff Preferences*, Annex A, para. 7. See also, Panel Reports, *EC – Export Subsidies on Sugar*, para. 2.5.

[1017] Panel Reports, *EC – Export Subsidies on Sugar*, para. 2.5.

[1018] Panel Report, *EC – Tariff Preferences*, Annex A, para. 7.

[1019] Panel Reports, *EC – Bananas III*, para. 7.8.

[1020] Panel Reports, *EC – Bananas III*, para. 7.8.

[1021] Panel Reports, *EC – Bananas III*, para. 7.8.

[1022] Panel Report, *EC – Hormones (Canada)*, para. 8.17.

BCI deleted, as indicated **[***]**

7.17 In this case, Brazil has not presented the Panel with any similar reasons in support of its request for enhanced third party rights. While the Panel accepts that Brazil has a substantial interest in the aircraft sector, the Panel considers that Brazil's interest in "the aircraft sector" as a whole constitutes an insufficient basis for granting Brazil enhanced third party rights.[1023] Brazil has not claimed that it produces large civil aircraft, or that it has any trade interests in large civil aircraft, for instance as a supplier to producers of large civil aircraft. Brazil has not claimed that regional aircraft produced in Brazil compete with large civil aircraft. Brazil has not claimed that it maintains any measures similar to those at issue in this dispute; to the contrary, Brazil claims that it does not confer subsidies for the development and production of new aircraft products.[1024] While Brazil has been involved as a party in a number of WTO disputes involving the aircraft sector, these disputes involved products (i.e. regional aircraft) and measures (e.g. export credits on the sale of such aircraft) that are not at issue in this dispute. Brazil has not explained how, in the light of the foregoing, the measures at issue have a significant economic or trade policy effect on Brazil. While we accept that Brazil has a general systemic interest in the interpretation of the SCM Agreement, this does not differentiate Brazil from any other WTO Member. Finally, both parties agree that enhanced third party rights are not warranted in this case.

7.18 We therefore decline Brazil's request for "enhanced" third party rights in these proceedings.[1025]

[1023] Brazil submits that it has a significant economic interest in "the aircraft sector" (Letter from Brazil to the Panel, dated 21 December 2006, para. 6), that any findings concerning the relevant provisions of the SCM Agreement "in relation to the aircraft sector" are necessarily of direct and substantial economic interest to Brazil (Ibid., para. 6), that trade-distorting subsidies in "the aircraft sector" are considerably greater than the impact of similar policies on other industries (Ibid., para. 7), and that the interpretation of the SCM Agreement "as applied to the aircraft sector" may affect the way Brazil and other Members apply the relevant disciplines of the SCM Agreement to the "civil aircraft sector" (Ibid., para. 8).

[1024] Ibid., para. 7.

[1025] Brazil has requested the Panel to grant it the "enhanced" third party right "to review and comment on the interim Panel Report, in particular the summary of Brazil's arguments in the draft descriptive part of the Panel report". In *EC – Bananas III*, the panel referred to the "normal practice" of permitting third parties to review the draft of the summary of their arguments in the descriptive part of the report (Panel Reports, *EC – Bananas III*, para. 7.9). Insofar as Brazil is merely requesting the Panel to permit Brazil to review and comment on the summary of its arguments contained in any descriptive sections of the Panel's draft report, the Panel sees no reason to depart from the normal practice in WTO panel proceedings. We note that, while both the United States and the European Communities oppose Brazil's request for "enhanced" third party rights, the United States considers that "the ability to comment on the description of its arguments in the draft descriptive part of the report" is "a right routinely provided to third parties, not an "enhanced" right". Letter from the United States to the Panel, dated 9 February 2007, footnote 13.

BCI deleted, as indicated **[***]**

2. Decision of the Panel on the request of the European Communities for a preliminary ruling on Annex V of the SCM Agreement[1026]

7.19 On 24 November 2006, the European Communities filed a request for preliminary rulings relating to the information-gathering procedure envisaged in Annex V of the SCM Agreement. The European Communities' request arises from the parties' inability to reach agreement on the initiation of an Annex V procedure in the above-captioned dispute, and from the parties' inability to reach agreement on a means for transferring the information obtained during the Annex V process that was initiated and completed in *United States — Measures Affecting Trade in Large Civil Aircraft* (DS317) to the present Panel. The European Communities made two alternative requests.[1027] First, the European Communities requested the Panel to rule that the Annex V procedure has been initiated in this dispute, and that the United States is therefore under an obligation to respond to certain questions put to the United States by the European Communities in a letter dated 25 May 2006. Second, in the event that the Panel is unable to rule that the Annex V procedure has been initiated, the European Communities requested that the Panel exercise its discretion under Article 13 of the DSU to put some or all of these questions to the United States. In its response filed on 22 March 2007, the United States requested the Panel to reject both of the European Communities' requests. The Panel also received letters from Canada and Brazil, dated 1 December 2006 and 21 December 2006 respectively, commenting on the European Communities' requests.

7.20 The Panel is unable to rule that an Annex V procedure was initiated in this dispute. Paragraph 2 of Annex V of the SCM Agreement provides that, in cases where matters are referred to the DSB under Article 7.4 of the SCM Agreement, and serious prejudice has to be demonstrated, "the DSB shall, upon request, initiate the procedure" envisaged in Annex V. In this case, the European Communities requested that an Annex V information-gathering process be initiated.[1028] However, the United States refused, for various reasons, to consent to the initiation of an Annex V procedure in this dispute. It is clear from the minutes of the DSB meetings where this matter was discussed that the DSB never took any action to initiate an Annex V procedure, or to designate a DSB

[1026] The decision reproduced in paras. 7.19-7.24 was originally transmitted to the parties on 30 July 2007. In support of its Preliminary Ruling Request, the European Communities submits that the initiation of an Annex V procedure is a DSB "action" that is not subject to consensus, and that "is automatically taken" upon request, unless there is negative consensus not to take the action. The European Communities further argues that certain provisions of Annex V are capable of operating independently of whether or not a facilitator has been designated, or is functional. With respect to its alternative request under Article 13 of the DSU, the European Communities submits that there is no limitation as to what kind of information the Panel may require, or when it may require it, under Article 13. The European Communities also contends that the Panel, in determining whether to exercise its discretion under Article 13, should take due account of the specifics of a serious prejudice case, and the requirements of due process. The European Communities argues that it is not requesting the Panel to alleviate the European Communities' burden of proof, or make a prima facie case for it. The United States argues that nothing in the DSU or elsewhere in the covered agreements gives panels the authority to "rule" on the conduct of the DSB, and that no provision of the covered agreements allows panels to describe the duties the DSB must perform, define the procedures it must follow in performing those duties, or evaluate whether it has done so properly. The covered agreements provide no support for the European Communities' contention that initiation of an Annex V process is "automatic" upon the request of the complaining party, subject only to negative consensus. Finally, the European Communities and the United States have already undertaken an exhaustive Annex V process in relation to the European Communities' claims. The United States also argues that it would be inappropriate, at this juncture, for the Panel to grant the European Communities' Article 13 request. The United States further argues that Article 13 of the DSU does not authorize a panel to collect for a complaining party information that the complaining party - as opposed to the panel - deems to be "necessary and appropriate."

[1027] In its 24 November 2006 request, the European Communities also requested the Panel to adopt procedures for the protection of business confidential information and highly sensitive business information.

[1028] WT/DS353/2 (also circulated as WT/DS317/5), p. 14.

representative pursuant to paragraph 4 of Annex V. Rather, the DSB merely "took note" of the statements made by Members at those meetings.[1029]

7.21 The European Communities argues that the initiation of an Annex V procedure is not a DSB "decision" which must be taken by consensus, but is rather a DSB "action" that is not subject to consensus, and which "occurs automatically"[1030] upon request unless there is negative consensus not to take the action. The Panel is not convinced by the European Communities' argument. It may well be that the initiation of an Annex V procedure is not a "decision" that is subject to consensus within the meaning of Article 2.4 of the DSU. However, it does not follow that the initiation of an Annex V procedure "occurs automatically" in the absence of any action by the DSB to initiate the procedure. We see no basis for such an interpretation in the text of paragraph 2 of Annex V, which states that "the DSB shall, upon request, initiate the procedure" envisaged in Annex V. The term "initiate" means "{b}egin, introduce, set going, originate".[1031] The ordinary meaning of the term "initiate", used in the immediate context of a positive duty formulated in the active voice ("the DSB shall ... initiate"), implies that some form of action is required on the part of the DSB. Furthermore, the European Communities' interpretation of paragraph 2 of Annex V would effectively remove the DSB from having any role in the initiation of an Annex V procedure, which seems inconsistent with the ordinary meaning of the terms of that provision. Finally, accepting the European Communities' argument that there are certain so-called DSB "actions" that may be deemed to "occur automatically" in the absence of any indication of agreement or actual action by the DSB could have far-reaching and potentially surprising systemic consequences that would be inconsistent with the object and purpose of providing "security and predictability" to the multilateral trading system.[1032] For these reasons, we conclude that, even though it may well be that the initiation of an Annex V procedure is not subject to consensus, the initiation of an Annex V procedure does not "occur automatically" upon request, in the absence of any action by the DSB to initiate the procedure.

7.22 We therefore deny the European Communities' request that the Panel "rule that the Annex V procedure requested by the European Communities at the DSB meeting of 21 April 2006 and confirmed at the DSB meeting of 17 May 2006 has been initiated".[1033] The European Communities further requested that the Panel: (i) "rule that the United States is under an obligation to cooperate and answer the questions that have been put to it in the European Communities' letter to the Facilitator dated 23 May 2006"; (ii) "rule that Mr. Mateo Diego-Fernández was effectively designated as a facilitator in that procedure, and in the event that the Panel does not make this ruling, nevertheless to provide the relief set forth in the preceding and following points"; and (iii) "adopt such working procedures that would allow the completion of the Annex V procedure in due time before the deadline for the filing of the European Communities' first written submission".[1034] These additional requests are necessarily dependant upon the Panel ruling that the Annex V procedure was initiated. We therefore deny these requests as well.

7.23 The Panel has decided that it will not exercise its discretion under Article 13 of the DSU to seek information from the United States prior to having carefully reviewed the parties' first written submissions. We recall that Article 13.1 of the DSU grants a panel the right to seek such information "as the panel considers necessary and appropriate". By virtue of Article 13 of the DSU, a panel "is

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[1029] WT/DSB/M/205, paras. 75-76; WT/DSB/M/206, para. 26; WT/DSB/M/207, para. 101; WT/DSB/M/210, para. 104; WT/DSB/M/212, paras. 70-71.

[1030] Request for Preliminary Rulings by the European Communities, dated 24 November 2006 ("European Communities' Preliminary Ruling Request"), para. 14.

[1031] *Shorter Oxford English Dictionary*, 5th ed., W.R. Trumble, A. Stevenson (eds.), (Oxford University Press, 2002), Vol. 1, p. 1377.

[1032] See Article 3.2 of the DSU.

[1033] European Communities' Preliminary Ruling Request, para. 58.

[1034] Ibid.

vested with ample and extensive discretionary authority to determine *when* it needs information to resolve a dispute and *what* information it needs".[1035] However, a panel will usually not be in the position to determine what information is "necessary and appropriate", and will therefore usually not be in a position to exercise its authority under Article 13 of the DSU to request information "the panel considers necessary and appropriate", prior to having carefully reviewed the parties' first written submissions. This is especially true where, as in the present case, one party requests a panel to transmit hundreds of questions to another party relating to a range of measures. The European Communities contends that the Panel should make use of its discretion under Article 13 of the DSU, taking into account the "specifics of a serious prejudice case", and taking into account the "requirements of due process" to ensure that "all procedural rights conferred on the European Communities and recognized in Annex V SCM Agreement are fully respected".[1036] The Panel notes that the first sentence of paragraph 9 of Annex V of the SCM Agreement provides that nothing in the information-gathering procedure envisaged in Annex V limits the ability of a panel to seek such additional information "as *it deems essential* to a proper resolution of the dispute" (emphasis added). Thus, even in a serious prejudice case, a panel should still seek information only where the Panel is able to satisfy itself that such information is necessary (or "essential"). Moreover, having taken into account the particular circumstances and procedural history of this dispute, the Panel does not consider it necessary or appropriate to use its discretion under Article 13 of the DSU to remedy the parties' inability to reach agreement on the initiation of an Annex V procedure, or to remedy the parties' inability to reach agreement on a means for transferring the information obtained during the DS317 Annex V procedure to the present Panel.

7.24 The Panel encourages the parties to continue their efforts to reach agreement on the question of the information to be used in this dispute.

D. WHETHER THE MEASURES AT ISSUE CONSTITUTE SPECIFIC SUBSIDIES WITHIN THE MEANING OF ARTICLES 1 AND 2 OF THE SCM AGREEMENT

1. Introduction

7.25 In this section of the Report, the Panel examines whether the measures challenged by the European Communities constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. We begin by setting out the text of these provisions. We then set out our general approach to estimating the amounts of any subsidies found to exist.

7.26 Article 1 of the SCM Agreement is entitled "Definition of a Subsidy". Paragraph 1 of Article 1 provides that:

> "1.1 For the purpose of this Agreement, a subsidy shall be deemed to exist if:
>
> (a)(1) there is a financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as "government"), i.e. where:
>
> (i) a government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);
>
> (ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits);

[1035] Appellate Body Report, *Canada – Aircraft*, para. 192.
[1036] European Communities' Preliminary Ruling Request, paras. 48-49.

BCI deleted, as indicated **[***]**

(iii) a government provides goods or services other than general infrastructure, or purchases goods;

(iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments;

or

(a)(2) there is any form of income or price support in the sense of Article XVI of GATT 1994;

and

(b) a benefit is thereby conferred.

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[1] In accordance with the provisions of Article XVI of GATT 1994 (Note to Article XVI) and the provisions of Annexes I through III of this Agreement, the exemption of an exported product from duties or taxes borne by the like product when destined for domestic consumption, or the remission of such duties or taxes in amounts not in excess of those which have accrued, shall not be deemed to be a subsidy."

7.27 Article 2 of the SCM Agreement is entitled "Specificity". Paragraph 1 of Article 2 provides that:

"2.1 In order to determine whether a subsidy, as defined in paragraph 1 of Article 1, is specific to an enterprise or industry or group of enterprises or industries (referred to in this Agreement as 'certain enterprises') within the jurisdiction of the granting authority, the following principles shall apply:

(a) Where the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy to certain enterprises, such subsidy shall be specific.

(b) Where the granting authority, or the legislation pursuant to which the granting authority operates, establishes objective criteria or conditions[2] governing the eligibility for, and the amount of, a subsidy, specificity shall not exist, provided that the eligibility is automatic and that such criteria and conditions are strictly adhered to. The criteria or conditions must be clearly spelled out in law, regulation, or other official document, so as to be capable of verification.

(c) If, notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b), there are reasons to believe that the subsidy may in fact be specific, other factors may be considered. Such factors are: use of a subsidy programme by a limited number of certain enterprises, predominant use by certain enterprises, the granting of disproportionately large amounts of subsidy to certain enterprises,

> and the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy.[3] In applying this subparagraph, account shall be taken of the extent of diversification of economic activities within the jurisdiction of the granting authority, as well as of the length of time during which the subsidy programme has been in operation.

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[2] Objective criteria or conditions, as used herein, mean criteria or conditions which are neutral, which do not favour certain enterprises over others, and which are economic in nature and horizontal in application, such as number of employees or size of enterprise.

[3] In this regard, in particular, information on the frequency with which applications for a subsidy are refused or approved and the reasons for such decisions shall be considered."

7.28 Articles 1 and 2 of the SCM Agreement have been interpreted and applied in a number of prior panel and Appellate Body reports.[1037] We have taken all of these prior panel and Appellate Body reports into account where relevant to a legal issue before the Panel.

7.29 With respect to the existence of a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement, the Appellate Body has explained that:

> "An evaluation of the existence of a financial contribution involves consideration of the *nature of the transaction* through which something of economic value is transferred by a government. A wide range of transactions falls within the meaning of 'financial contribution' in Article 1.1(a)(1)."[1038]

7.30 With respect to the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the Appellate Body has explained that:

> "the word 'benefit', as used in Article 1.1(b), implies some kind of *comparison*. This must be so, for there can be no 'benefit' to the recipient unless the 'financial contribution' makes the recipient 'better off' than it would otherwise have been, absent that contribution. In our view, the marketplace provides an appropriate basis for

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[1037] Panel Report, *Indonesia – Autos*; Panel Report, *Canada – Aircraft*; Appellate Body Report, *Canada – Aircraft*; Panel Report *Brazil – Aircraft*; Appellate Body Report, *Brazil – Aircraft*; Panel Report, *Australia – Automotive Leather II*; Panel Report, *US – FSC*; Appellate Body Report, *US – FSC*; Panel Report, *US – Lead and Bismuth II*; Appellate Body Report, *US – Lead and Bismuth II*; Panel Report, *Canada – Autos*; Appellate Body Report, *Canada – Autos*; Panel Report, *US – Export Restraints*; Panel Report, *Brazil – Aircraft (Article 21.5 – Canada II)*; Panel Report, *US – FSC (Article 21.5 – EC)*; Appellate Body Report, *US – FSC (Article 21.5 – EC)*; Panel Report, *Canada – Aircraft Credits and Guarantees*; Decision by the Arbitrator, *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)*; Panel Report, *US – Countervailing Measures on Certain EC Products*; Appellate Body Report, *US – Countervailing Measures on Certain EC Products*; Panel Report, *US – Offset Act (Byrd Amendment)*; Panel Report, *US – Softwood Lumber III*; Panel Report, *US – Softwood Lumber IV*; Appellate Body Report, *US – Softwood Lumber IV*; Panel Report, *US – Upland Cotton*; Panel Report, *US – Countervailing Duty Investigation on DRAMS*; Appellate Body Report, *US – Countervailing Duty Investigation on DRAMS*; Panel Report, *Korea – Commercial Vessels*; Panel Report, *EC – Countervailing Measures on DRAM Chips*; Panel Report, *Japan – DRAMs (Korea)*; Appellate Body Report, *Japan – DRAMs (Korea)*; Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*; and Panel Report, *Mexico – Olive Oil*.

The Panel Report in *EC and certain member States – Large Civil Aircraft* was circulated on 30 June 2010, and is currently under appeal.

[1038] Appellate Body Report, *US – Softwood Lumber IV*, para. 52 (emphasis added).

> comparison in determining whether a 'benefit' has been 'conferred', because the trade-distorting potential of a 'financial contribution' can be identified by determining whether the recipient has received a 'financial contribution' on *terms more favourable* than those available to the recipient in the market."[1039]

7.31 With respect to the concept of "specificity" in Article 2 of the SCM Agreement, the panel in *US – Upland Cotton* explained that:

> "At some point that is not made precise in the text of the agreement, and which may modulate according to the particular circumstances of a given case, a subsidy would cease to be specific because it is *sufficiently broadly available* throughout an economy as not to benefit a *particular limited group of producers of certain products*. The plain words of Article 2.1 indicate that specificity is a general concept, and the breadth or narrowness of specificity is not susceptible to rigid quantitative definition. Whether a subsidy is specific can only be assessed on a case-by-case basis." [1040]

7.32 As the complaining party, the European Communities carries the burden of demonstrating, for each of the challenged measures, that: (i) the measure it is challenging actually exists; (ii) the measure involves a financial contribution by a public body within the meaning of Article 1.1(a)(1) of the SCM Agreement; (iii) the financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement; and (iv) the subsidy is specific within the meaning of Article 2 of the SCM Agreement. These are cumulative requirements. Thus, if the Panel finds that the European Communities has failed to demonstrate any one of these elements, then the Panel must find that the European Communities has failed to demonstrate the existence of a specific subsidy.

7.33 For most of the measures at issue, the European Communities: (i) presents evidence and argument relating not only to the existence of a specific subsidy under Articles 1 and 2 of the SCM Agreement, but also the amount of each alleged subsidy[1041]; (ii) allocates a portion (in many instances, the entirety) of the total amount of each subsidy to what it terms "Boeing's LCA division"[1042]; and (iii) asks the Panel to adopt its estimate of the amount of the subsidy to Boeing's LCA division as the "best information available" and to "draw adverse inferences" due to the United States' alleged "non-cooperation" in the information-gathering process under Annex V of the

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[1039] Appellate Body Report, *Canada – Aircraft*, para. 157 (emphasis added).

[1040] Panel Report, *US – Upland Cotton*, para. 7.1142 (emphasis added).

[1041] European Communities' first written submission, Section VI; European Communities' second written submission, Section III.

[1042] Prior to 1997, The Boeing Company ("Boeing") was one of two firms in the United States that produced large civil aircraft, with the other being the McDonnell Douglas Corporation ("McDonnell Douglas"). Prior to 1997, these two firms comprised the "U.S. LCA industry". McDonnell Douglas merged with The Boeing Company in 1997. Following the merger, Boeing became the sole U.S. producer of large civil aircraft. Boeing is divided into several different business segments and units. "Boeing Commercial Airplanes" ("BCA") is the segment of Boeing that produces large civil aircraft and parts. Boeing's "Integrated Defense Systems" (IDS) segment focuses on defence, intelligence, communications, and space. Boeing's "Phantom Works" unit conducts R&D for both segments of the company. Boeing Capital Corporation provides asset-backed lending and leasing to support other Boeing business units by arranging, structuring, and providing financing to assist in the sale and delivery of Boeing products. The European Communities defines "Boeing's LCA division" as "the segment of Boeing that produces LCA and its parts". European Communities' first written submission, para. 77. The European Communities explains that it uses "Boeing's LCA division" to mean the pre-merger "LCA divisions" of both Boeing and McDonnell Douglas, as well as the post-merger "LCA division" of Boeing, i.e. Boeing Commercial Airplanes. European Communities' response to question 294, para. 710. Thus, we understand the European Communities to use "Boeing's LCA division" interchangeably with "Boeing Commercial Airplanes (BCA) division", and with "US LCA industry".

SCM Agreement.[1043] The Panel will briefly set out its approach to these three elements of the European Communities' argumentation.

7.34 First, in this section of the Report the Panel will determine not only whether each of the measures at issue is a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement, but also the amount of any subsidy found to exist on a measure-by-measure basis.[1044]

7.35 Second, where we determine that a measure constitutes a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement, we will then, and only then, determine the amount of the subsidy that is properly allocated to "Boeing's LCA division". In our view, the question of whether a challenged measure constitutes a subsidy within the meaning of Article 1 is distinct from the question of what *amount* of the subsidy is properly allocated to Boeing's LCA division. This approach is consistent with prior panel reports. In *US – Upland Cotton*, the panel considered that "the argument ... relating to the 'amount' or 'portion' of the subsidy ... is not germane to the inquiry that is to be conducted under Article 1 of the *SCM Agreement*. Here, we are asking whether a 'financial contribution' exists, and whether a 'benefit' is thereby conferred".[1045] The panel in *EC – Countervailing Measures on DRAM Chips* explained that:

> "there are two distinct questions to be addressed. The first relates to the *existence* of a benefit, the second deals with the *calculation* of the amount of the benefit. In other words, a finding that the financial contribution was provided on terms more favourable than what the market place provided for is, in our view, sufficient to find that a benefit existed. Our view is based on our interpretation of the term benefit as it appears in Article 1.1 of the *SCM Agreement* which determines when a subsidy is deemed to *exist*, read in the context of the *SCM Agreement* and Article 14 thereof, in particular." [1046]

The panel further noted:

> "that it would not be necessary nor appropriate for us to address these questions concerning the *calculation* of the amount of benefit, if we were to conclude that the investigating authority failed to properly establish the *existence* of a benefit in the first place."[1047]

7.36 Although the European Communities has formulated some of its arguments relating to the existence of benefit within the meaning of Article 1.1(b) of the SCM Agreement in terms of how the subsidies "relate to the production" of Boeing LCA, it has acknowledged in response to a question from the Panel that:

> "In general terms, and in accordance with Appellate Body findings, the European Communities considers that a 'benefit' is conferred when 'the recipient has received a financial contribution' on terms more favourable than those available to the recipient in the market.' The fact that the subsidies 'relate to the production' of one or more models of Boeing LCA is not strictly relevant to the ultimate question of

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[1043] European Communities' first written submission, Section IV, and paras. 132, 154, 168, 182, 194, 203, 230, 245, 261, 277, 325, 336, 361, 385, 406, 431, 450, 525, 549, 573, 589, 604, 619, 632, 651, 763, 799, 848, 876, 912 and 958.

[1044] Appellate Body Report, *Canada – Wheat Exports and Grain Imports*, para. 126 ("{a}s a general principle, panels are free to structure the order of their analysis as they see fit. In so doing, panels may find it useful to take account of the manner in which a claim is presented to them by a complaining Member").

[1045] Panel Report, *US – Upland Cotton*, para. 7.1119. See also, parties' responses to question 1.

[1046] Panel Report, *EC – Countervailing Measures on DRAM Chips*, para. 7.178 (emphasis original).

[1047] Panel Report, *EC – Countervailing Measures on DRAM Chips*, footnote 169 (emphasis original).

> whether or not a 'benefit' is conferred within the meaning of Article 1.1(b) of the *SCM Agreement*. It is, however, relevant to the question of how to *allocate* the benefit to individual Boeing LCA, for purposes of evaluating the resulting adverse effects."[1048]

7.37 Third, the question of whether the United States did or did not "fail to cooperate in the information-gathering process" within the meaning of paragraph 6 of Annex V of the SCM Agreement has been the subject of extensive argumentation in this dispute.[1049] However, the Panel does not see any practical need to make a ruling on this issue. The Panel recalls that it is not required to "quantify precisely the amount of the subsidy"[1050] and notes that both parties agree that, in the absence of actual data regarding the amount of an alleged subsidy, a panel may base its findings on an estimate of the amount of the subsidy. More specifically, in response to a question from the Panel, both parties agree that the use of estimates is consistent with a panel's requirement to make an "objective assessment of the facts of the case" within the meaning of Article 11 of the DSU, and that a panel need not find "non-cooperation" within the meaning of paragraph 6 of Annex V of the SCM Agreement in order to rely on an estimate of the amount of a subsidy for the purpose of the serious prejudice analysis.[1051]

7.38 For each of the challenged measures, the European Communities has presented the Panel with evidence and arguments in support of its estimate of the amount of the subsidy allegedly provided to Boeing. Where the United States disputes the European Communities' estimate of the amount of an alleged subsidy, it has provided the Panel with its own evidence and/or arguments to support its own, generally lower, estimate. If the Panel were to consider the evidence and/or arguments advanced by the United States to be insufficient to rebut the evidence and arguments presented by the European Communities, then the Panel would accept the European Communities' estimate. In such a situation, the Panel would accept the European Communities' estimate not by virtue of United States "non-cooperation", and not as a matter of drawing "adverse inferences", but simply by virtue of the operation of the normal principles regarding the burden of proof in WTO dispute settlement proceedings. Likewise, if the Panel were to consider the evidence and/or arguments advanced by the United States to be sufficient to rebut the evidence and arguments presented by the European Communities, then the Panel would accept the United States' estimate not by virtue of United States "cooperation", but simply by virtue of the operation of the normal principles regarding the burden of proof in WTO dispute settlement proceedings.

[1048] European Communities' response to question 134(a), para. 123 (emphasis original) (footnote omitted). The European Communities adds that "{w}ith particular respect to the benefit from the DOD RDT&E Program, the reference to the fact that it relates to 'the production of all Boeing LCA' (European Communities' first written submission, para. 764) serves to further clarify the limitations in the *scope* of the European Communities' *claim*". European Communities' response to question 134(a), para. 124 (emphasis added).

[1049] European Communities' first written submission, paras. 51-68; United States' first written submission, paras. 24-37; European Communities' second written submission, paras. 19-23; United States' second written submission, para. 4; Parties responses (and related comments) to questions 2, 106, 107, 108, 316, and 317; Brazil's written submission, paras. 3-8; Brazil's response to question 4; Brazil's oral statement, paras. 3-6; China's written submission, paras. 3-26; China's response to question 4; Korea's written submission, paras. 9-15; Korea's response to question 4.

[1050] Appellate Body Report, *US – Upland Cotton*, para. 467 ("In sum, reading Article 6.3(c) in the context of Article 6.8 and Annex V suggests that a panel should have regard to the magnitude of the challenged subsidy and its relationship to prices of the product in the relevant market when analyzing whether the effect of a subsidy is significant price suppression. In many cases, it may be difficult to decide this question in the absence of such an assessment. Nevertheless, this does not mean that Article 6.3(c) imposes an obligation on panels to quantify precisely the amount of a subsidy benefiting the product at issue in every case. A precise, definitive quantification of the subsidy is not required.")

[1051] Parties' responses to question 109.

BCI deleted, as indicated **[***]**

2. State of Washington and municipalities therein

(a) HB 2294 tax incentives

(i) Introduction

7.39 The European Communities argues that each of the tax measures adopted under a Washington State Legislature House Bill constitutes a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement, confers a benefit to Boeing and is specific under Article 2. The European Communities estimates that the amount of the subsidy to Boeing's LCA division as a result of these tax measures is approximately $3.56 billion over the period 2004-2024.[1052]

7.40 The United States contests that certain of the tax measures constitute a financial contribution and that certain are specific within the meaning of Articles 1 and 2 of the SCM Agreement. Further, according to the United States, the European Communities has over-estimated the amount of any benefit to Boeing.

(ii) The measures at issue

7.41 In 2003, the Washington State Legislature passed *House Bill 2294* ("HB 2294"), entitled *"An Act Related to Retaining and Attracting the Aerospace Industry to Washington State".*[1053] The legislation relates to "retaining and attracting the aerospace industry to Washington State" and includes "comprehensive tax incentives" directed at achieving this aim.[1054]

7.42 HB 2294 includes five tax measures which the European Communities challenges as subsidies to Boeing's LCA division that cause adverse effects and are also prohibited under the SCM Agreement.[1055] The five measures are:

(a) A Business and Occupation ("B&O") tax reduction;

(b) B&O tax credits for preproduction development, computer software and hardware and property taxes;

(c) Sales and use tax exemptions for computers, construction and equipment;

(d) Leasehold excise tax exemptions; and

(e) Property tax exemptions.

[1052] The European Communities presents this estimate in fiscal year terms, i.e. $3.56 billion from "FY 2004 through FY 2024". The European Communities also presents its estimates of the amounts of a number of other alleged subsidies in fiscal year terms. When discussing the amount of the alleged subsidies in this Report, we simply refer to the years, without specification as to whether it is the calendar year or a fiscal year. We do so for the sake of simplicity, and because the differences appear to be de minimis, and are certainly inconsequential to our findings. As the European Communities itself explains at footnote 78 of its first written submission:

> "The figures in this chart {Exhibit EC-17, Amount of Subsidies to Boeing's LCA Division} come from a variety of sources. Some of these sources provide figures in fiscal year terms, while others provide figures in calendar year terms. Further, fiscal years vary from one granting entity to another. For sake of simplicity, and because the difference is de minimis, the European Communities has not attempted to reconcile these discrepancies."

[1053] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, HB 2294, preamble.
[1054] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, Preamble and section 1.
[1055] European Communities' first written submission, para. 69.

BCI deleted, as indicated **[***]**

7.43 HB 2294 took effect in December 2003 when Boeing entered the "Memorandum of Agreement for Project Olympus" ("the Memorandum of Agreement") with the State of Washington.[1056] It entered into effect on this day because HB 2294 (section 17) provides that it:

> "{T}akes effect on the first day of the month in which the governor and a manufacturer of commercial airplanes sign a memorandum of agreement regarding an affirmative final decision to site a significant commercial airplane final assembly facility in Washington state." [1057]

7.44 A "significant commercial airplane final assembly facility" is defined in HB 2294 as "a location with the capacity to produce at least thirty-six super-efficient airplanes a year". Further, a "superefficient airplane" is defined at section 17 of HB 2294 as a "twin aisle airplane that carries between two hundred and three hundred fifty passengers, with a range of more than seven thousand two hundred nautical miles, a cruising speed of approximately mach .85, and that uses fifteen to twenty percent less fuel than other similar airplanes on the market".

7.45 The Memorandum of Agreement confirms that the Project Olympus Master Site Agreement ("the MSA")[1058] between Boeing and the State of Washington constitutes an agreement to site a significant commercial airplane final assembly facility in Washington, specifically in the City of Everett. According to the European Communities, HB 2294, the MSA and an Ordinance enacted within the City of Everett constitute a "Boeing Incentive Package", designed to lure Boeing to establish its new production facilities for the 787 in the State of Washington.[1059]

7.46 Although HB 2294 is the relevant legislation under which the tax measures are adopted, the MSA confirms or reiterates that the State of Washington will extend each of the tax measures under HB 2294 to Boeing. For example, in relation to the Washington B&O tax reduction, the MSA provides:

> "4.1 The State represents and warrants to Boeing that HB 2294 was enacted in accordance with all laws, HB 2294 is and remains in full force and effect subject only to the…contingency contained in HB 2294…
>
> 4.1.1 The State…agrees that Boeing shall be entitled to a reduction in the rate of …the B&O tax pursuant to HB 2294…The State shall not suspend, revoke, require repayment of the rate reduction as authorized by HB 2294." [1060]

[1056] Memorandum of Agreement for Project Olympus, 19 December 2003, Exhibit EC-57.

[1057] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, section 17. We note that the tax measures under HB 2294 do not depend upon delivery of the Boeing 787, which as of September 2010 has not yet occurred, before they can be claimed. Even though the Washington B&O tax reduction is an *ad valorem* tax reduction which the European Communities states "is generally not realized until the year the aircraft is delivered" (International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, p. 2), it applies to all Boeing aircraft manufactured in Washington and not just the 787.

[1058] Project Olympus Master Site Development and Location Agreement Between the Boeing Company and the State of Washington, County of Snohomish, City of Everett and Certain Other Governmental Units and Authorities of or in the State of Washington, 19 December 2003 ("MSA"), Exhibit EC-58.

[1059] European Communities' first written submission, para. 81.

[1060] For the equivalent provisions of the MSA in relation to the other HB 2294 tax incentives, see European Communities' first written submission, paras. 111, 113, 115, 119, 121, 124 and 128. See also, MSA, Exhibit EC-58.

BCI deleted, as indicated **[***]**

Washington B&O tax reduction

7.47 The B&O tax is Washington's major business tax.[1061] It is a tax on the "gross receipts of all businesses operating in Washington, as a measure of the privilege of engaging in business".[1062] "Gross receipts" refers to the gross proceeds of sales, the gross income of a business, or the value of products, depending upon which is applicable.[1063] Taxpayers are taxed based on the activities in which they engage in the State of Washington, such as manufacturing, wholesaling, retailing or the provision of services.[1064]

7.48 HB 2294 lowers the B&O tax rate for manufacturers of commercial airplanes or components for such planes. In particular, the tax on the value of the manufactured commercial aircraft and the tax on the sales of such aircraft, where the seller is also the manufacturer, is reduced in two stages. HB 2294 provides for a reduction of the tax rate from 0.484 per cent (or 0.471 per cent in the case of retail sales) to 0.4235 per cent on 1 October 2005. It provides for a further reduction to 0.2904 per cent on the later of 1 July 2007 or the commencement of final assembly of a "super-efficient" airplane.[1065] "Final assembly" is defined to mean the activity of assembling an airplane from component parts necessary for its mechanical operation such that the finished commercial airplane is ready to deliver to the ultimate consumer.[1066] The taxation reductions apply until 2024 unless final assembly of a super-efficient aircraft has not commenced by 31 December 2007, in which case the tax rate reverts to 0.484 per cent for manufacturing and wholesaling activities and 0.471 per cent for retailing activities.[1067] Given that final assembly of the 787, which the European Communities and the United States agree meets the definition of a "superefficient airplane", commenced in Washington in the first half of 2007, the reduced taxation rates continue until 2024.

7.49 The relevant provisions of HB 2294 state (see sections 3(13) and 4(13)):

> "13 (a) Beginning October 1, 2005, upon every person engaging within this state in the business of manufacturing commercial airplanes, or components of such airplanes, as to such persons the amount of tax with respect to such business shall, in the case of manufacturers, be equal to the value of the product manufactured, or in the case of processors for hire, be equal to the gross income of the business, multiplied by the rate of:
>
> > (i) 0.4235 percent from October 1, 2005, through the later of June 30, 2007, or the day preceding the date final assembly of a superefficient airplane begins in Washington state, as determined under section 17 of this act; and
> >
> > (ii) 0.2904 percent beginning on the later of July 1, 2007, or the date final assembly of a superefficient airplane begins in Washington state, as determined under section 17 of this act.

[1061] Final Bill Report, HB 2294, undated, Exhibit EC-90.
[1062] Business and Occupation Tax, RCW 82.04, Exhibit US-179.
[1063] Business and Occupation Tax, RCW 82.04, Exhibit US-179.
[1064] United States' first written submission, para. 429.
[1065] See HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54. See sections 3(13) and 4(13); European Communities' first written submission, para. 105 and United States' first written submission, para. 438.
[1066] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), section 17.
[1067] See HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), HB 2294. See sections 3(13) and 4(13); European Communities' first written submission, para. 105 and United States' first written submission, para. 438.

BCI deleted, as indicated **[***]**

> (b) Beginning October 1, 2005, upon every person engaging within this state in the business of making sales, at retail or wholesale, of commercial airplanes, or components of such airplanes, manufactured by that person, as to such persons the amount of tax with respect to such business shall be equal to the gross proceeds of sales of the airplanes or components multiplied by the rate of:
>
> > (i) 0.4235 percent from October 1, 2005, through the later of June 30, 2007, or the day preceding the date final assembly of a superefficient airplane begins in Washington state, as determined under section 17 of this act; and
> >
> > (ii) 0.2904 percent beginning on the later of July 1, 2007, or the date final assembly of a superefficient airplane begins in Washington state, as determined under section 17 of this act.
>
> ...
>
> (e) This subsection (13) does not apply after the earlier of: July 1, 2024; or December 31, 2007, if assembly of a superefficient airplane does not begin by December 31, 2007, as determined under section 17 of this act." [1068]

Washington B&O tax credits for preproduction development, for computer software and hardware and for property taxes

7.50 HB 2294 includes three B&O tax credits relating to certain preproduction development expenditures, computer software and hardware and property taxes. The European Communities cites *Black's Law Dictionary* in explaining that a tax credit is an amount subtracted directly from a taxpayer's total B&O tax liability.[1069]

7.51 Section 7 of HB 2294 provides for a *B&O tax credit for preproduction development* to any "manufacturer or processor for hire of commercial airplanes, or components of such airplanes" for its expenditure on certain aeronautics-related research, design and engineering activities performed in the development of a product. The credit is equal to 1.5 per cent of qualifying preproduction development expenditure. It can be claimed after 1 July 2005, although credits earned prior to this date can be accrued and carried forward. The credit expires on 1 July 2024.

7.52 Section 7 of HB 2294 provides:

> "(1)(a) In computing the tax imposed under this chapter, a credit is allowed for each person for preproduction development spending occurring after the effective date of this act.
>
> …
>
> (2) The credit is equal to the amount of qualified preproduction development expenditures of a person, multiplied by a rate of 1.5 percent.
>
> (3) Except as provided in subsection (1)(b) of this section the credit shall be taken against taxes due for the same calendar year in which the qualified preproduction development expenditures are incurred…The credit for each calendar

[1068] See HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1069] European Communities' first written submission, para. 109.

year shall not exceed the amount of tax otherwise due under this chapter for the calendar year. Refunds may not be granted in the place of a credit.

…

(5)...

(b) "Person" means…a manufacturer or processor for hire of commercial airplanes, or components for such airplanes…

(c) "Preproduction development" means research, design, and engineering activities performed in relation to the development of a product…

...

(e) "Qualified preproduction development" means preproduction development performed within this state in the field of aeronautics.

(f) "Qualified preproduction development expenditures" means operating expenses, including wages…benefits, supplies, and computer expenses, directly incurred in a qualified preproduction development." [1070]

7.53 Section 8 of HB 2294 grants a *B&O tax credit for computer software and hardware* to any "manufacturer of commercial airplanes" for its expenditures, between 1 July 1995 and 1 July 2003, on design and preproduction development computer software and hardware used primarily for the digital design and development of commercial airplanes. The credit is equal to 8.44 per cent of the purchase price of the property.

7.54 In particular, section 8 of HB 2294 provides:

"(1) In computing the tax imposed under this chapter, a credit is allowed for the investment related to design and preproduction development computer software and hardware acquired between July 1, 1995, and the effective date of this act, and used by an eligible person primarily for the digital design and development of commercial airplanes. The credit shall be equal to the purchase price of such property, multiplied by 8.44 percent. Credit taken in any one calendar year may not exceed ten million dollars, and total lifetime credit taken under this section by any one person may not exceed twenty million dollars. Credit may be carried over until used.

…

(2)(c) "Eligible person" means…a manufacturer of commercial airplanes." [1071]

7.55 Section 15 of HB 2294 grants a *B&O tax credit for property taxes*. It is equal to the state and local property taxes paid on certain property used in the manufacture of commercial airplanes or components for such airplanes. The three types of qualifying property taxes are:

(a) taxes on new buildings, and the land upon which the buildings are located, used in manufacturing airplanes and components;

[1070] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1071] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

BCI deleted, as indicated **[***]**

(b) taxes on increases in the assessed value of a building, used in manufacturing aircraft or components, due to renovation or expansion of the building; and

(c) taxes on certain machinery and equipment used in manufacturing commercial airplanes or their components.

7.56 In particular, section 15 of HB 2294 provides:

"(1) In computing the tax imposed under this chapter, a credit is allowed for property taxes paid during the calendar year.

(2) The credit is equal to:

(a)(i) Property taxes paid on new buildings, and land upon which this property is located, built after the effective date of this act, and used in manufacturing commercial airplanes or components of such airplanes; or

(ii) Property taxes attributable to an increase in assessed value due to the renovation or expansion, after the effective date of this act, of a building used in manufacturing commercial airplanes or components of such airplanes; and

(b) Property taxes paid on machinery and equipment…used in manufacturing commercial airplanes or components of such airplanes and acquired after the effective date of this act." [1072]

Washington sales and use tax exemption for computer software, hardware and peripherals and for construction services and equipment

7.57 In addition to the B&O tax, the State of Washington has a retail sales and a use tax. The retail sales tax is a tax on the sale of tangible personal property and certain services. The use tax is due on the value of tangible personal property and certain services on which the Washington retail sales tax has not been paid.

7.58 HB 2294 provides for two exemptions to the sales and use taxes, namely, an exemption relating to computer hardware, software and peripherals and an exemption relating to certain construction services and equipment.[1073]

7.59 Sections 9 and 10 of HB 2294 provide for a *sales or use tax exemption for computer hardware, software and peripherals,* where the computer equipment is purchased for or used in the development of commercial airplanes or their components by manufacturers or processors for hire of such airplanes or components. Further, the labour and services used in installing the computer equipment are exempt from sales and use taxes.

7.60 More particularly, HB 2294 provides:

"9(1) The {sales tax} shall not apply to sales of computer hardware, computer peripherals, or software, not otherwise eligible for exemption…, to a manufacturer or

[1072] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

[1073] Something is tax-exempt when there is a "freedom from a liability to be taxed" or when it is "freed or released from an obligation or requirement" to be taxed, or when it is "not legally subject to taxation" (*Shorter Oxford English Dictionary,* L. Brown (ed.) (Clarendon Press, 1993), Vol. II, p. 3192; *Webster's New Encyclopedic Dictionary,* (Könemann, 1993), p. 350 and *Black's Law Dictionary,* 7th ed., B.A. Garner (ed.) (West Group, 1999), respectively).

> processor for hire of commercial airplanes or components of such airplanes, used primarily in the development, design, and engineering of such products, or to sales of or charges made for labor and services rendered in respect to installing the computer hardware, computer peripherals, or software…
>
> …
>
> 10(1) The provisions of this chapter shall not apply in respect to the use of computer hardware, computer peripherals, or software, not otherwise eligible for exemption…, by a manufacturer or processor for hire of commercial airplanes or components of such airplanes, used primarily in the development, design and engineering of such products, or to the use of labor and services rendered in respect to installing the computer hardware, computer peripherals, or software." [1074]

7.61 Sections 11 and 12 of HB 2294 provide for a *sales tax exemption for construction services and equipment.* The exemption applies in relation to labour and services rendered in the construction of new buildings by a manufacturer of superefficient airplanes or by a port district intending to lease to such a manufacturer and in relation to tangible personal property incorporated as a component of such buildings. The buildings must be used exclusively in the manufacturing of superefficient airplanes.

7.62 More particularly, HB 2294 provides:

> "11(1) {The sales tax} shall not apply to charges made for labor and services rendered in respect to the constructing of new building by a manufacturer engaged in the manufacturing of superefficient airplanes or by a port district, to be leased to a manufacturer engaged in the manufacturing of superefficient airplanes, to sales of tangible personal property that will be incorporated as an ingredient or component of such buildings during the course of the constructing, or to labor and services rendered in respect to installing, during the course of constructing, building fixtures not otherwise eligible for exemption…
>
> …
>
> (3) The exemption in this section applies to buildings, or parts of buildings, that are used exclusively in the manufacturing of superefficient airplanes, including building used for the storage of raw materials and finished product." [1075]

Washington leasehold excise tax exemption and property tax exemption

7.63 The State of Washington imposes a leasehold excise tax on the use and possession of publicly owned real or personal property by private individuals or businesses. It can be imposed by the State of Washington or by cities and counties. Any local leasehold excise taxes are credited against the state leasehold excise tax.

7.64 Section 13 of HB 2294 provides for a *leasehold excise tax exemption* for manufacturers of superefficient airplanes that lease newly built port district facilities for exclusive use in the manufacturing of superefficient airplanes. However, if the lessee claims the B&O tax credit for property taxes, it may not also claim the leasehold excise tax exemption.

[1074] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1075] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

7.65 More particularly, section 13 of HB 2294 provides:

> "(1) All leasehold interests in port district facilities exempt from tax under section 11 or 12 of this act {the sales and use tax exemptions for construction services and equipment} and used by a manufacturer engaged in the manufacturing of superefficient airplanes…are exempt from tax under this chapter. A person taking the credit under section 15 of this act {the B&O tax credit for property taxes} is not eligible for the exemption under this section." [1076]

7.66 The State of Washington imposes a property tax on all real and personal property, based upon its market value, unless the property is specifically exempted by law.[1077]

7.67 Section 14 of HB 2294 provides for a *property tax exemption* for lessees of port district facilities (where the facilities are newly built by the port district to be leased to a superefficient airplane manufacturer). The exemption does not apply to persons claiming the B&O tax credit for property taxes paid.

7.68 More particularly, section 14 of HB 2294 provides:

> "(1) Effective January 1, 2005, all buildings, machinery, equipment, and other personal property of a lessee of a port district eligible under sections 11 and 12 of this act {the sections relating to the sales and use tax exemption for construction services and equipment}, used exclusively in manufacturing superefficient airplanes, are exempt from property taxation. A person taking the credit under section 15 of this act {the B&O tax credit for property taxes} is not eligible for the exemption under this section." [1078]

(iii) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

Arguments of the European Communities

Whether a financial contribution exists in relation to each of the measures

7.69 The European Communities argues that each of the taxation measures under HB 2294 constitutes a financial contribution to Boeing because each involves the foregoing of government revenue otherwise due, within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.[1079]

7.70 According to the European Communities, the Appellate Body found in *US - FSC* that the analysis under Article 1.1(a)(1)(ii) requires a comparison between the tax rate in question and a "defined normative benchmark", where the benchmark is "the rules of taxation that each Member, by its own choice, establishes for itself".[1080] Further, where it is possible to identify the measure at issue as an "exception" to a "general" rule of taxation, it is appropriate to apply a "but for" test to assess whether revenue is foregone that would otherwise be due. If it is not possible to identify a general

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[1076] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

[1077] United States' first written submission, para. 126 and United States' first written submission, para. 509.

[1078] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

[1079] European Communities' first written submission, para. 130. See also, European Communities' response to question 229, para. 429, where the European Communities asserts that the financial contribution is received by Boeing and by suppliers of LCA components, the latter of which passes-through to Boeing.

[1080] European Communities' second written submission, para. 35, quoting from Appellate Body Report, *US – FSC*, para. 90.

rule and an exception to it, additional analysis, comparing the fiscal treatment of "legitimately comparable income", may be required.[1081]

> Whether a financial contribution exists for those tax measures which the parties agree have been used by Boeing

7.71 There is no dispute between the parties that the B&O tax reduction, the B&O tax credits and the sales and use tax exemption for computer software, hardware and peripherals have been claimed by Boeing.

7.72 In relation to the Washington B&O tax reduction, the European Communities argues that a "but for" analysis is the appropriate test to apply to the B&O tax rate reduction.[1082] The European Communities submits that prior to the enactment of HB 2294, there was a general manufacturing B&O tax rate of 0.484 per cent. The effect of HB 2294 is to exempt manufacturers of commercial airplanes and commercial airplane components from this general rate. Were it not for HB 2294, such aircraft and component manufacturers would pay a higher tax rate, namely 0.484 per cent.[1083]

7.73 The European Communities submits that if the Panel considers the "but for" test inappropriate and finds it necessary to compare the tax treatment of gross receipts from aerospace manufacturing to "legitimately comparable income" or a "defined, normative benchmark", the general manufacturing rate of 0.484 per cent, established by section 82.04.240 of the *Revised Code of Washington,* is the relevant normative benchmark. It allows for the comparison of the tax treatment of "legitimately comparable income", namely income derived from general manufacturing operations and income from aircraft manufacturing operations.[1084]

7.74 The European Communities contends that the United States is in error in attributing importance to the fact that other specific manufacturing activities, apart from aircraft manufacturing, have had their B&O tax rate adjusted.[1085] The European Communities argues that these adjustments may also be subsidies, but are not at issue in this dispute.[1086] According to the European Communities, there is no general rule or norm that governs these adjustments, for example a general rule to achieve equity between effective rates of taxation, as argued by the United States.[1087] Therefore, contrary to the arguments of the United States, the European Communities asserts that the range of manufacturing taxation rates, whether nominal or effective, cannot serve as the normative benchmark against which to compare the B&O tax reduction to aircraft manufacturers.[1088]

7.75 The European Communities asserts that the B&O tax credits and the sales and use tax exemption for computer software, hardware and peripherals constitute the foregoing of revenue otherwise due.[1089] Given that this is uncontested by the United States, the European Communities does not elaborate on this submission.

[1081] European Communities' second written submission, para. 36.
[1082] European Communities' second written submission, para. 37.
[1083] European Communities' second written submission, paras. 37-38.
[1084] European Communities' second written submission, paras. 39-41.
[1085] European Communities' comments on United States' response to question 32.
[1086] European Communities' comments on United States' response to question 32, para. 126.
[1087] European Communities' comments on United States' response to question 32, para. 118.
[1088] European Communities' comments on United States' response to question 32, para. 124.
[1089] European Communities' first written submission, para. 130.

BCI deleted, as indicated **[***]**

Whether a financial contribution exists for those tax measures in relation to which there is disagreement about whether the subsidies have been used by Boeing

7.76 The European Communities rejects the United States' argument that the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption have never been used by Boeing. Even if the subsidies have never been used, the European Communities argues that the tax measures are mandatory and that there is a current right or entitlement to them for manufacturers of superefficient airplanes. Therefore, they constitute a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement.[1090] The European Communities notes that, contrary to the submission of the United States, Boeing "qualifies" for the tax measures in issue, regardless of whether or not it has made use of them.[1091]

7.77 More particularly, the European Communities rejects the United States' argument that the *sales and use tax exemption for construction services and equipment* does not constitute a financial contribution because Boeing has not taken advantage of the tax exemption, and will never do so, given that it has not built or leased any new buildings or facilities in connection with its "superefficient" airplane, the 787.[1092] The European Communities argues that the United States has provided no evidence to support its contention that Boeing has not and will not use the sales and use tax exemption for construction services and equipment. The attachments to the MSA cited by the United States do not demonstrate that Boeing is using only existing facilities for manufacturing the 787. In fact, the European Communities notes that the MSA indicates that the site where the manufacturing is occurring consists of "parcels of land", which may be used to construct new buildings. Further, Boeing may choose to tear down its existing buildings to construct new ones.[1093]

7.78 The European Communities also refutes the United States' argument that Boeing does not "qualify" for the sales and use tax exemption. Even if Boeing does not and will not make use of the exemptions, it still "qualifies" for them. Indeed, the MSA provides that the State "shall" extend them to Boeing. The tax exemptions are mandatory and available to manufacturers of "superefficient airplanes" until 2024. Boeing would immediately be granted the incentives upon deciding to construct new buildings. Therefore, the exemptions are financial contributions within the meaning of Article 1.1(a)(1) of the SCM Agreement because revenue to be foregone in the future constitutes a financial contribution as long as there is an existing right or entitlement to the tax break.[1094]

7.79 Finally, the European Communities notes that the spreadsheet prepared by the Washington State Department of Revenue, and on which the United States relies in quantifying the amounts of the subsidies, indicates that Boeing is receiving a B&O tax credit for property taxes paid "on new construction related to the 7E7 plane" in Everett. According to the European Communities, this construction also qualifies for the sales and use tax exemption.[1095]

7.80 In relation to the *leasehold excise tax exemption* and the *property tax exemption,* the European Communities argues that Boeing may be engaging in sale-leaseback transactions with a port district.[1096] Boeing could tear down its existing facilities to construct new buildings, and engage in

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[1090] European Communities' second written submission, para. 82 and European Communities' comments on United States' response to question 239, para. 339.

[1091] European Communities' comments on United States' response to question 239, paras. 335-336.

[1092] United States' first written submission, para. 503.

[1093] European Communities' comments on United States' response to question 239.

[1094] European Communities' comments on United States' response to question 239 and European Communities' second written submission, para. 82 and footnote 127.

[1095] European Communities' comments on United States' response to question 239, para. 337. Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184.

[1096] European Communities' comments on United States' response to question 239, para. 333.

sale-leaseback transactions with respect to those new buildings.[1097] In fact, the MSA specifically contemplates sale-leaseback transactions between Boeing and a port district and the Project Olympus Restatement of Commitments provides that "{t}he Port of Everett will purchase approximately nine acres of Boeing land and leaseback to Boeing for 20 years".[1098] Therefore, according to the European Communities, these documents cannot serve as the basis for concluding that Boeing is not leasing facilities from a port district.[1099]

7.81 Finally, the European Communities argues that it is possible for Boeing to claim the Washington B&O tax credit for property taxes *and* the leasehold excise tax exemption *and* the property tax exemption.[1100] According to the European Communities, Boeing has a choice from year to year about whether to claim the B&O tax credit for property taxes or both the leasehold excise and the property tax exemptions.[1101] Further, Boeing could set up two different legal persons, one eligible for the B&O tax credit and the other for the leasehold excise and property tax exemptions, resulting in Boeing claiming all three tax measures in the same year.[1102]

Revenue to be foregone in the future

7.82 In its calculation of the subsidy amounts, the European Communities includes revenue to be foregone in the future. The European Communities rejects the argument of the United States that Article 1.1(a)(1)(ii) requires that the amount of a financial contribution be limited to revenue that has actually been foregone in the past. According to the European Communities, this argument is based on a fundamental error. Article 1.1 does not address the issue of subsidy amount.[1103] The only matter Article 1.1(a)(1) deals with is the *existence* of a financial contribution, rather than its amount. The issue of the amount of a subsidy arises only in the context of the adverse effects inquiry.[1104] The European Communities argues that the United States is in error in asserting that Article 1.1(a)(1)(ii) is written in the past tense. Article 1.1(a)(1)(ii) provides that a financial contribution exists when "government revenue that *is* otherwise due *is* foregone or not collected".[1105] If the provision were in the past tense it would refer to "government revenue that *was* otherwise due *was* foregone or not collected". This interpretation is confirmed by the Spanish and the French versions of the SCM Agreement.[1106]

7.83 According to the European Communities, the important factor under Article 1.1(a)(1)(ii) is whether a right to the financial contribution exists, rather than the time at which the foregoing of revenue actually occurs.[1107] If this were not the case, Members could never challenge subsidy programmes, but only individual applications of them.[1108] The European Communities argues that the distinction made by the United States between the legal entitlement to a financial contribution, and the actual moment in time at which the transfer occurs, is artificial and not found within the SCM Agreement.[1109] The European Communities contends that the comparison the United States makes between Article 1.1(a)(1)(ii) and Article 1.1(a)(1)(i), which refers to "*potential* direct transfers of

[1097] European Communities' comments on United States' response to question 239, para. 333.
[1098] European Communities' second written submission, para 125 and European Communities' comments on United States' response to question 239, para. 338.
[1099] European Communities' comments on United States' response to question 239, para. 338.
[1100] European Communities' response to question 363, paras. 166-174.
[1101] European Communities' response to question 363, paras. 169-172.
[1102] European Communities' response to question 363, para. 173.
[1103] European Communities' second written submission, para. 45.
[1104] European Communities' second written submission, para. 48.
[1105] European Communities' second written submission, para. 50.
[1106] European Communities' second written submission, para. 50.
[1107] European Communities' second written submission, para. 51.
[1108] European Communities' second written submission, para. 51.
[1109] European Communities' second written submission, para. 53.

funds", does not advance the United States' argument. In making this argument, the United States attempts to equate the term "potential" with "future", when in fact it is equivalent to "possible".[1110]

Argument in the alternative

7.84 The European Communities argues that if the Panel were to conclude that the taxation measures under HB 2294 do not involve the foregoing of revenue otherwise due, the measures, together with the MSA, amount to a potential direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement.[1111] The European Communities expressly states that the Panel need not consider this issue if the Panel agrees with the European Communities' principal argument that there is a financial contribution in relation to each tax measure under Article 1.1(a)(1)(ii) of the SCM Agreement.[1112]

7.85 The European Communities submits that the MSA guarantees all of the commitments in the Boeing Incentive Package, including the taxation measures under HB 2294. The European Communities' argument that there is a financial contribution under Article 1.1(a)(1)(i) centres around Article 10.4 of the MSA, which provides, relevantly:[1113]

> "10.4 **Make Whole Actions** The Public Parties and Boeing each assert that it enters into this Agreement based upon certain objectives and expectations, more specifically described below in this Section 10.4. The Public Parties and Boeing each further acknowledge and agree that it is not possible to predict, consider and provide for all future changes, circumstances or contingencies affecting the performance or implementation of this Agreement. Therefore, in order to preserve the basis upon which the Agreement is entered into by the Public Parties and Boeing, the Public Parties and Boeing each agree to the terms and conditions set forth in this Section 10.4.
>
> 10.4.1 The Public Parties each acknowledge and agree that Boeing has entered into this Agreement in material reliance on each and all of the obligations and Commitments of the Public Parties under this Agreement, as a package and without exception, with the reasonable expectation that Boeing will receive all of the benefits of such obligations and Commitments. Therefore, each Public Party represents, warrants and covenants to Boeing that in the event of a change in law, or any other act, event or circumstance, the result of which would be to materially diminish, impede, impair or prevent in connection with the Project Olympus the full performance after the Effective Date of any or all of the obligations and Commitments made by the applicable Public Parties, all applicable Public Parties shall exercise their best efforts to, and to the extent permitted by law shall, provide Boeing either with an exemption from the law as so changed or otherwise with another obligation or Commitment acceptable to Boeing and having economic effect equivalent to the Commitment so lessened or removed. If the applicable Public Parties fail to provide such exemption or other Commitment, such failure shall be a substantial impairment of this Agreement…
>
> …

[1110] European Communities' second written submission, para. 52.

[1111] European Communities' first written submission, paras. 130 and 151; European Communities' second written submission, paras. 55, 67, footnote 100. See also, European Communities' second written submission, para. 75, footnote 118 and paras. 83, 91 and 117.

[1112] European Communities' response to question 124, para. 84.

[1113] MSA, Exhibit EC-58.

BCI deleted, as indicated **[***]**

> 10.4.3 The Public Parties and Boeing each acknowledge and agree …(iii) that the terms and conditions set forth in this Section 10.4 are material to this Agreement and intended to be enforced to the maximum extent possible."

7.86 The European Communities argues that as a result of this provision of the MSA, each of the alleged subsidies "as promised to Boeing through the Project Olympus MSA, results in a financial contribution in the sense of a potential direct transfer of funds".[1114] Therefore, we interpret the European Communities' argument to be that the relevant measures which constitute a "potential direct transfer of funds" are HB 2294 together with the MSA.[1115]

7.87 The European Communities submits that Article 10.4.1 of the MSA amounts to a potential direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement because it guarantees to Boeing the performance of all of the commitments in the "Boeing Incentive Package", or provision of a remedy "having economic effect equivalent" to those incentives.[1116] Therefore, according to the European Communities, there is a potential direct transfer of funds in connection with each of the obligations and commitments made through the MSA, which includes the taxation measures under HB 2294. In fact, the MSA guarantees that Boeing will receive a $4 billion subsidy, regardless of its form.[1117]

7.88 The European Communities rejects the United States' argument that Article 10.4.1 is simply a "best efforts" provision that encourages the parties to comply with their commitments to the extent legally permissible. According to the European Communities, this interpretation is "absurd and contrary to the plain meaning of the text of the provision…{and} would render {the} provision completely meaningless".[1118] The European Communities argues that Article 10.4.1 is a *guarantee* that should something happen to lessen one of the Public Parties' obligations under the MSA, the Public Parties must provide Boeing with an exemption from the change in law, or if that is not possible, the full economic value of the lost obligation or commitment. The European Communities notes that simply exercising "best efforts" would not release the Public Parties from their commitment to provide Boeing with another obligation or commitment of equivalent economic effect under Article 10.4.1.[1119] If an event were to trigger the guarantee under Article 10.4.1, the Public Parties to the contract could not fulfil their obligation under Article 10.4.1 merely by claiming that they had made their "best efforts" to provide something of equivalent economic effect, but were unable to do so.[1120] If that were to happen, Boeing would have a viable cause for breach of contract because Article 10.4.1 provides that if the guarantee is not honoured, "such failure shall be a substantial impairment of this Agreement". Article 11.2.1 of the MSA provides that in the event of a breach of the agreement, Boeing may seek "specific performance of any of the…commitments…or may be awarded damages".[1121] Therefore, if the Public Parties are not able to fulfil one of the commitments guaranteed by the MSA, such as providing the Washington tax incentives, Boeing must be provided with a commitment of equivalent economic effect, or may receive damages for breach of contract. Therefore, the tax abatements, as promised to Boeing through the MSA, "result in a financial contribution in the sense of a potential direct transfer of funds".[1122] Further, the

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[1114] European Communities' second written submission, para. 55.

[1115] See European Communities' response to question 124 where the European Communities describes its alternative claim as: "Article 10.4.1 of the MSA gives rise to a potential direct transfer of funds in connection with each of the MSA obligations and commitments at issue in this dispute".

[1116] European Communities' second written submission, para. 205.

[1117] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 32.

[1118] European Communities' second written submission, para. 203.

[1119] European Communities' comments on United States' response to question 43, para. 145.

[1120] European Communities' comments on United States' response to question 43, para. 145.

[1121] European Communities' comments on United States' response to question 43, para. 145.

[1122] European Communities' second written submission, para. 55.

European Communities notes that Article 10.6.6 of the MSA, and not Article 10.4.1, is the MSA's "best efforts" provision because it provides:

> "10.6.6 The parties hereby agree to use best efforts to perform all commitments to the maximum extent authorized by current laws and in full compliance with applicable laws and constitutional provisions." [1123]

Therefore, if Article 10.4.1 were simply a "best efforts" provision, it would be completely meaningless in the light of Article 10.6.6.[1124] Finally, it is clear from the rest of the text of Article 10.4 that Article 10.4.1 is a guarantee rather than a "best efforts" provision. Article 10.4 states that its purpose is to "preserve the basis upon which the {MSA} is entered into", namely to preserve the expectations of the parties, including the "reasonable expectation that Boeing will receive all of the benefits" of the commitments undertaken by the Public Parties. Further, Article 10.4.3 provides that Article 10.4 is "material to the Agreement and intended to be enforced to the maximum extent possible".[1125]

7.89 The European Communities acknowledges that Article 10.4.1 guarantees the obligations in the MSA, or provides for a commitment of equivalent economic effect, "to the extent permitted by law".[1126] However, according to the European Communities, this simply requires that in fulfilling the guarantee, the Public Parties may not do something that is contrary to law. The European Communities notes that commitments made by public authorities in contracts with private companies will be limited by constitutions and applicable laws in most, if not in all, WTO Member jurisdictions. Contrary to the United States' argument, reflecting this fact within the contract does not make a commitment, such as the one in Article 10.4.1, "entirely speculative".[1127] Further, the European Communities argues that "given that the Public Parties have the power to make or change the state and local laws, the 'to the extent permitted by law provision' would appear to have little practical impact".[1128] In addition, the other obligation or commitment of equivalent economic effect need not be something that requires the legislature to enact it.[1129]

7.90 In relation to the correct interpretation of "potential direct transfer of funds" under Article 1.1(a)(1)(i) of the SCM Agreement, the European Communities and the United States agree that there must be some "currently defined and committed circumstances – i.e. a defined triggering event" that gives rise to the direct transfer of funds.[1130] However, while the United States argues that the consequence of the triggering event *must* be a direct transfer of funds, the European Communities contends that where the triggering event requires the transfer of either money *or* something apart from money, at the option of the public authorities, this cannot fall outside the scope of "potential direct transfer of funds".[1131] The European Communities notes that *one* of the remedies that Boeing could receive in the event of a breach of the guarantee under the MSA is a direct transfer of funds equal to the value of the obligation or commitment lessened or removed.[1132] Therefore, Article 10.4.1 results in a potential direct transfer of funds. According to the European Communities, the United States' submission that a "potential direct transfer of funds" exists only where it is certain that the recipient of the alleged financial contribution will receive a direct transfer of funds should the triggering event

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[1123] MSA, Exhibit EC-58 and European Communities' second written submission, para. 208.
[1124] European Communities' second written submission, para. 208.
[1125] European Communities' second written submission, para. 207.
[1126] European Communities' second written submission, para. 206.
[1127] European Communities' comments on United States' response to question 124, para. 49.
[1128] European Communities' second written submission, para. 206.
[1129] European Communities' comments on United States' response to question 43, para. 146.
[1130] See European Communities' comments on United States' response to question 124, para. 52.
[1131] European Communities' comments on United States' response to question 124, paras. 52-53.
[1132] European Communities' comments on United States' response to question 43, para. 147.

occur "leads to an absurd result".[1133] The United States' interpretation makes it very easy for Members to circumvent the disciplines of the SCM Agreement because Members could simply attach a possible course of action, not involving the transfer of funds, to a measure that would otherwise be a potential direct transfer of funds.[1134] For example, a government could guarantee a loan by committing either to transfer funds to the creditor, or to transfer something else of value, such as a piece of land, should the borrower default. The European Communities rejects the United States' submission that adding the option of transferring land upon default takes the guarantee outside the scope of Article 1.1(a)(1)(i) of the SCM Agreement.[1135]

7.91 In response to the United States' argument that it is "entirely speculative" what if anything a Public Party would provide under the Article 10.4.1 guarantee and what if any remedy a court may impose, the European Communities contends that it is precisely the uncertainty regarding whether a direct transfer of funds will occur that makes the guarantee a potential direct transfer of funds.[1136] The European Communities submits that where it is certain that a transfer of funds will take place, this is characterized as a direct transfer of funds under Article 1.1(a)(1)(i), rather than as a potential direct transfer of funds.[1137] To support this interpretation, the European Communities notes that the dictionary definition of "potential" is "*possible* as opposed to actual", which captures a wide range of uncertainty regarding whether a transfer of funds will take place. Further, the European Communities quotes the panel in *Brazil – Aircraft,* which held that "if the determination of whether a measure was a 'potential direct transfer of funds' depended on the degree of likelihood or probability that a payment would subsequently occur, then the drafters surely would have chosen an adjective more suggestive of high probability than 'potential'".[1138]

7.92 Finally, the European Communities submits that the object and purpose of the SCM Agreement is to "impose multilateral disciplines on subsidies which distort international trade" and one type of distortion is the transfer of risk from a private party to the government via a potential direct transfer of funds. This is evident from the example provided in Article 1.1(a)(1)(i), namely a loan guarantee.[1139] The European Communities argues that Article 10.4.1 transfers the risk of default on the Public Parties' commitments under the MSA from Boeing to the government and as a result there is no reason to treat it any differently to a loan guarantee.[1140]

Whether a benefit to Boeing exists in relation to each of the measures

7.93 The European Communities argues that each of the tax measures under HB 2294 confers a benefit to Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because Boeing is not required to pay anything in return for them. The tax measures result in Boeing receiving advantages on non-market terms.[1141] In its arguments regarding the existence of a benefit, the European Communities relies upon *US – FSC,* in which the panel held that the foregoing of certain taxes that would otherwise be due "clearly confers a benefit".[1142]

[1133] European Communities' comments on United States' response to question 124, para. 56.
[1134] European Communities' comments on United States' response to question 124, para. 56.
[1135] European Communities' comments on United States' response to question 124, para. 56.
[1136] European Communities' comments on United States' response to question 43, para. 147.
[1137] European Communities' comments on United States' response to question 43, para. 147.
[1138] European Communities' comments on United States' response to question 124, para. 87.
[1139] European Communities' comments on United States' response to question 124, para. 89.
[1140] In fact, the European Communities notes that Article 10.4.1 transfers the risk directly from the subsidy recipient to the government, whereas a loan guarantee transfers the risk in a less than direct manner from a third party to the government.
[1141] European Communities' first written submission, paras. 133, 138.
[1142] European Communities' first written submission, para. 137.

BCI deleted, as indicated **[***]**

7.94 The European Communities also submits that the Washington B&O tax reduction to manufacturers of components for commercial airplanes confers a benefit on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement.[1143] In this regard, the European Communities relies on a pass-through analysis. The European Communities' pass-through arguments are outlined commencing at paragraph 7.221 of this Report, in the section regarding the amount of the subsidy, for the reasons expressed at paragraph 7.214 of this Report. The European Communities does not argue pass-through in relation to any of the other taxation measures under HB 2294.[1144]

Arguments of the United States

Whether a financial contribution exists in relation to each of the measures

7.95 The United States contests that the B&O tax reduction to Boeing, the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption constitute financial contributions under Article 1.1(a)(1)(ii) of the SCM Agreement.

7.96 According to the United States, the Appellate Body has held that in analyzing whether revenue otherwise due has been foregone under Article 1.1(a)(1)(ii), it is necessary that there be a "defined normative benchmark against which a comparison can be made".[1145] Further, the normative benchmark is the "Member's own tax rules". Therefore, what is otherwise due depends "on the rules of taxation that each Member, by its own choice, establishes for itself".[1146] The Appellate Body has commented that it may be difficult to identify the relevant benchmark where a Member's tax system is "varied and complex". In any analysis, "there must be a rational basis for comparing the fiscal treatment of the income subject to the contested measure and the fiscal treatment of certain other income".[1147] Where it is not possible to characterize a tax measure as an exception to a general rule, it is necessary to compare the fiscal treatment of "legitimately comparable income".[1148]

Whether a financial contribution exists for those tax measures which the parties agree have been used by Boeing

7.97 Applying the guidance from the Appellate Body to the Washington B&O tax reduction, the United States argues that the appropriate benchmark is the "range of nominal B&O tax rates that the State applies to all categories of business activities subject to the B&O tax".[1149] The United States submits that the B&O tax system imposes taxes on categories of activities. There are four major activity classifications and tax rates (including manufacturing, taxed at 0.484 per cent). However, these four categories are further subdivided into 36 other categories, each with its own tax rate, ranging from 3.3 per cent to 0.138 per cent.[1150] The United States argues that, in the light of the varying rates for different business activities, there is no general tax rate under the B&O tax system. The 0.484 per cent rate for manufacturing is just one rate within a multi-rate system and there is no rational basis to use it as the comparator. In fact, 60 per cent of total taxable manufacturing income in the State receives an adjusted rate of taxation.[1151] Therefore, the normative benchmark is the range of

[1143] European Communities' first written submission, paras. 133, 135.
[1144] European Communities' second written submission, para. 69
[1145] United States' first written submission, para. 443.
[1146] United States' first written submission, para. 444.
[1147] United States' first written submission, para. 445.
[1148] United States' response to question 32, para. 81.
[1149] United States' first written submission, paras. 450-451.
[1150] United States' first written submission, para. 451.
[1151] United States' second written submission, para. 136.

B&O tax rates that exist for different business activities.[1152] Given that the reduced tax rate applicable to aerospace manufacturers falls within the range of all B&O tax rates (several business activities are taxed at a lower rate of 0.138 per cent), no revenue that is "otherwise due" has been foregone. The adjustment to the rate applicable to manufacturers of aircraft is consistent with the treatment of legitimately comparable income.[1153]

7.98 The United States also appears to suggest in its first written submission that the "average effective tax rate" for all businesses in the State of Washington is an appropriate normative benchmark.[1154] However, in its answers to a Panel question, the United States clarifies that it does not argue that the average effective tax rate is an appropriate benchmark. Rather, the United States provides information on the impact of the B&O tax reduction on the effective tax rate paid by aerospace manufacturers in order further to confirm the conclusion that the B&O tax reduction does not result in foregoing of revenue that is otherwise due.[1155] In particular, the United States provides extensive information regarding the "pyramiding" of the B&O tax.[1156] Essentially, the concept of "pyramiding" refers to the situation where goods and services that are inputs into higher stages of production are taxed multiple times as they move through the production chain. It results in a successively greater effective tax rate for each business in the chain, because the gross value of the product at each stage includes taxes paid on intermediate products. Therefore, the tax accumulates, or "pyramids", as it moves through the production chain.[1157] According to the United States, aerospace manufacturing often involves multiple steps. Therefore, the "effective" tax rate (which accounts for pyramiding) paid by the aerospace manufacturing sector is much higher than in other sectors. The United States contends that the purpose of the tax reduction in HB 2294 was to reduce this inequality. Following the tax reduction, the effective rate paid by aerospace manufacturers remains slightly higher than the average effective B&O tax rate.[1158] Therefore, this further confirms that the B&O tax rate for aerospace manufacturing is consistent with tax treatment afforded to comparable income in Washington and does not result in revenue foregone.[1159]

7.99 The United States does not contest that a financial contribution exists under Article 1.1(a)(1)(ii) in relation to the B&O tax credits and in relation to the sales and use tax exemption for computer software, hardware and peripherals.[1160]

> Whether a financial contribution exists for those tax measures in relation to which there is disagreement about whether the subsidies have been used by Boeing

7.100 In relation to the *sales and use tax exemption for construction services and equipment*, the United States argues that this is not a financial contribution because Boeing "has not used and will not use this tax exemption".[1161] The exemption applies in the event a manufacturer of superefficient airplanes constructs *new* buildings, or leases such buildings, to carry out its manufacturing. Boeing has done neither. Rather, Boeing decided to use its existing facilities in Everett to perform its 787 assembly work. The United States argues that Boeing has no plans to construct or lease any such buildings in the future. Therefore, Boeing is not eligible or does not qualify to take these tax

[1152] United States' first written submission, para. 452, United States' second written submission, para. 135.
[1153] United States' second written submission, para. 135.
[1154] United States' first written submission, paras. 460-461.
[1155] United States' response to question 32, para. 81.
[1156] United States' first written submission, paras. 455-461.
[1157] United States' first written submission, para. 456.
[1158] United States' first written submission, paras. 459-461 and United States' second written submission, para. 137.
[1159] United States' second written submission, para. 137.
[1160] United States' first written submission, paras. 492 and 499.
[1161] United States' first written submission, para. 503.

exemptions and the State of Washington has not foregone any revenue with respect to them. As a result, there is no financial contribution within the meaning of Article 1 of the SCM Agreement.[1162]

7.101 To support its argument that Boeing has not and will not take advantage of the sales and use tax exemption for construction services and equipment, the United States cites the MSA, including the exhibits to the MSA, and the Memorandum of Agreement, which "memorialize Boeing's decision to site its 787 operations in existing Boeing facilities in Everett".[1163] Further, the United States refers to the Washington Department of Revenue spreadsheet that estimates the cost to government of the HB 2294 tax measures. The Department estimates that the cost will be zero in relation to the tax exemption for construction services and equipment.[1164]

7.102 The United States argues that there is no financial contribution to Boeing as a result of the *leasehold excise tax exemption* or the *property tax exemption* and therefore no WTO-inconsistent subsidy.[1165] According to the United States, this is because Boeing has not and will not use either of the exemptions. The exemptions apply only to leasehold interests in, and property of lessees of, port district facilities used by manufacturers of superefficient airplanes. Boeing decided to use its existing facilities for the manufacture of the 787, rather than to lease public property.[1166] Evidence for this is found in the MSA and the Memorandum of Agreement. Therefore, Boeing does not qualify for the tax breaks.[1167]

7.103 The United States submits that "although the Master Site Agreement states that the Port of Everett will purchase nine acres of land and lease this land back to Boeing, that, in fact, has not occurred. Boeing has not entered and informs us that it does not intend to enter, a sale-leaseback arrangement for its 787 assembly facilities".[1168] Therefore, the State of Washington has not foregone any revenue as a result of the leasehold or property tax exemption provisions in HB 2294 and there is no financial contribution.[1169] Further evidence of this can be found in the Washington Department of Revenue spreadsheet estimating the cost to government of the HB 2294 tax measures over twenty years. The Department estimates that the cost of the leasehold and property tax exemptions will be nil.[1170]

7.104 Finally, the United States notes that it is not possible for Boeing to claim the B&O tax credit for property taxes *and* the leasehold excise tax exemption *and* the property tax exemption.[1171] This is because sections 13 and 14 of HB 2294, which are the provisions for the leasehold excise tax exemption and the property tax exemption, both provide that "{a} person taking the credit under section 15 of this act {B&O property tax credit} is not eligible for the exemption under this section". As a result of this provision, Boeing cannot benefit from all three measures in any one year. Therefore, according to the United States, the European Communities' quantification of the amounts of the subsidies is erroneous because it attributes a non-zero value to each of the three measures in every year through until 2024. The United States concludes that "the EC's quantification of the alleged subsidies assumes that Boeing will take and has taken the B&O tax credit for property taxes,

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[1162] United States' first written submission, paras. 503-505 and United States' response to question 239, paras. 398 and 400.
[1163] United States' response to question 239, para. 396.
[1164] United States' response to question 239, para. 399.
[1165] United States' first written submission, para. 508.
[1166] United States' first written submission, para. 507.
[1167] United States' response to question 239, paras. 396-398.
[1168] United States' first written submission, para. 508.
[1169] United States' first written submission, para. 508.
[1170] United States' response to question 239, para. 399.
[1171] United States' comments on European Communities' response to question 363.

the leasehold excise tax exemption and the property tax exemption in each year…this would be illegal and is factually incorrect".[1172]

Revenue to be foregone in the future

7.105 In addition to its argument that the State of Washington has not foregone revenue otherwise due, the United States argues that, in any event, when the financial contribution associated with an alleged subsidy is the foregoing of government revenue under Article 1.1(a)(1)(ii), the amount of the financial contribution must be limited to revenue that has *actually* been foregone.[1173] Revenue that a government may potentially forego in the future does not constitute a financial contribution under Article 1.1(a)(1)(ii).[1174] In response to a Panel question, the United States clarifies that, in its view, Article 1.1(a)(1)(ii) addresses the existence rather than the amount of a subsidy.[1175] The United States argues that where the financial contribution of an alleged subsidy consists of government revenue to be foregone in the future, this does not meet the Article 1 definition of a subsidy. The United States continues, in response to the same question, that "{w}hether a measure results in a financial contribution is one of the elements in the analysis of whether there is a subsidy and the amount of the subsidy. Because possible future revenue foregone cannot be considered a financial contribution, it cannot be considered a subsidy or be included in the subsidy amount".[1176]

7.106 The United States argues that revenue to be foregone in the future cannot constitute a financial contribution because Article 1.1(a)(1)(ii) states that a financial contribution exists when "government revenue that is otherwise due is *foregone* or *not collected*". This is in the past tense and refers only to revenue that has *already* been foregone or not collected.[1177] Article 1.1(a)(1)(ii) makes no reference to revenue that a government may choose to forego or not collect in the future. The United States contrasts this with the language of Article 1.1(a)(1)(i), which allows for "*potential* direct transfers of funds or liabilities". The United States argues that this clearly contemplates a financial contribution occurring in the future, as opposed to the language of Article 1.1(a)(1)(ii), which is not forward-looking.[1178]

7.107 In response to a Panel question, the United States acknowledges that measures mandating the foregoing of revenue otherwise due can be challenged "as such" in WTO dispute settlement, as occurred in *US – FSC*.[1179] However, in the same response, the United States insists that "no financial contribution exists under Article 1.1(a)(1)(ii) unless the government has foregone revenue".[1180]

Argument in the alternative

7.108 The United States rejects the European Communities' argument in the alternative that a potential direct transfer of funds exists under Article 1.1(a)(1)(i) of the SCM Agreement. Article 10.4.1 of the MSA does not provide Boeing with a "guarantee" that it will get an exemption from any change in law or a remedy of "equivalent economic effect". Rather, Article 10.4.1 is merely a "best efforts" provision that encourages the parties to the agreement to comply with their commitments to the extent legally permissible.[1181] This is because the commitment by the Public

[1172] United States' comments on European Communities' response to question 363, para. 182.
[1173] United States' first written submission, para. 462.
[1174] United States' first written submission, para. 462.
[1175] United States' response to question 125, para. 47. In addition, and more generally, see the parties' responses to question 1.
[1176] United States' response to question 125, para. 47.
[1177] United States' first written submission, para. 463.
[1178] United States' first written submission, para. 464.
[1179] United States' response to question 31, para. 80.
[1180] United States' response to question 31, para. 80.
[1181] United States' second written submission, paras. 587-588.

Parties in Article 10.4.1 is subject to the "best efforts" and "to the extent permitted by law" conditions. Therefore, Article 10.4.1 "has no independent economic value".[1182]

7.109 In relation to the "extent permitted by law condition", the United States argues that the Public Parties to the MSA do not have the power unilaterally to enact changes to Washington State laws, or to guarantee a potential direct transfer of funds. At most, the Public Parties can promise to use their best efforts to bring about changes in laws through the processes that produce such laws. They cannot and would not promise to do more.[1183]

7.110 According to the United States, the dictionary definition of "potential" is "possible as opposed to actual; capable of coming into being or action; latent".[1184] This suggests a future possibility based on some current capacity or state, not a "lack of certainty" or an entirely speculative outcome. This is even clearer through the inclusion of the synonym "latent" in the dictionary definition.[1185] Therefore, to establish that a measure constitutes a potential direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement, it is necessary to demonstrate that there are certain currently defined and committed circumstances under which the recipient of the alleged financial contribution is assured a direct transfer of funds by the granting authority.[1186] This is not the case with the MSA, which simply provides for a speculative, possible future financial contribution. Article 10.4.1 does not provide Boeing with a guarantee of any kind of payment or transfer of funds. This is because Article 10.4.1 is subject to the "best efforts" and the "to the extent permitted by law" conditions. Further, a direct transfer of funds is only one of the possible ways in which the Public Parties can meet the obligation under Article 10.4.1.[1187] In addition, if the Public Parties fail to honour one of the commitments under the MSA or to provide an alternative, Boeing could bring a civil cause of action in court. The United States argues that the result of such an action is "wholly indeterminate" and even the European Communities admits that "one of the remedies Boeing may receive in an action under Article 10.4.1 is a direct transfer of funds".[1188] Therefore, according to the United States, "there are no defined circumstances under which Boeing is assured anything, let alone a direct transfer of funds, nor is there any kind of other guarantee that it will receive such funds".[1189] The United States compares this to the example of a potential direct transfer of funds provided in Article 1.1(a)(1)(i), namely a loan guarantee. A loan guarantee is a current financial instrument that sets forth defined contingencies and provides that in the event that one of the contingencies arises, the guarantor is required to transfer funds to the recipient of the loan guarantee. In other words, there is a present commitment to transfer funds in certain defined circumstances.[1190] In contrast, Article 10.4.1 contains no such commitment. The United States clarifies that it does not consider the degree of probability of a future transfer relevant. Rather, what is relevant is whether there are defined circumstances in which a direct transfer of funds is required.[1191]

7.111 Finally, the United States submits that Article 10.4.1 of the MSA provides for best efforts to replace an impaired obligation or commitment with another "obligation" or "commitment", without specifying what the obligation or commitment must be. Therefore, it is impossible to evaluate *ex ante* whether any possible future "obligation" or "commitment" would be a potential direct transfer of

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[1182] United States' second written submission, para. 588.
[1183] United States' response to question 43, para. 118.
[1184] United States' response to question 124, para. 36 and United States' comments on European Communities' response to question 124, para. 64.
[1185] United States' comments on European Communities' response to question 124, para. 64.
[1186] United States' comments on European Communities' response to question 124, para. 64.
[1187] United States' response to question 124, para. 40.
[1188] United States' response to question 124, para. 41.
[1189] United States' response to question 124, para. 44.
[1190] United States' response to question 124, para. 42; United States' comments on European Communities' response to question 124, para. 65.
[1191] United States' comments on European Communities' response to question 124, para. 67.

funds that confers a benefit.[1192] The United States argues that the European Communities is asking the Panel to assume not only that a future transfer of some sort *will* occur, but also that the alternative measure will take the form of an actionable subsidy, or at least a financial contribution covered by Article 1.1(a)(1) of the SCM Agreement. The European Communities has not demonstrated that there is a basis for such an assumption.[1193]

Whether a benefit to Boeing exists in relation to each of the measures

7.112 The United States does not contest that if the tax measures are each a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement, then each confers a benefit to Boeing.[1194] The United States does not accept that the benefit of the B&O tax reduction to component manufacturers passes-through to Boeing. The United States' arguments in this regard are summarized commencing at paragraph 7.238 of this Report, in the section regarding the amount of the subsidy, for the reasons expressed at paragraph 7.214 of this Report.

Arguments of third parties

Australia

7.113 Australia notes that Washington B&O tax system consists of sector-specific tax rates.[1195] Relying upon the guidance provided by the Appellate Body in *US – FSC* and *US – FSC (Article 21.5 – EC),* Australia submits that when assessing whether the B&O tax reduction constitutes a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement, the Panel needs to compare "taxpayers in similar situations (i.e. other sectors engaged in business activities of a similar complexity/level of value-add)".[1196] The key question is whether the tax measures "represent a departure" from tax rules that would "otherwise" apply to that sector. A relevant factor for the Panel to consider in conducting the comparison under Article 1.1(a)(1)(ii) is the design of the measure under consideration or the "essential shape and the rationale that is exhibited for those measures in order to assess the nature of the relationship of the measure at issue with the overall tax regime".[1197] In the context of this case, Australia argues that the Panel needs to examine the reduction in the Washington B&O tax rates in the context of the Boeing Incentive Package.[1198]

7.114 In relation to the benefit analysis for the taxation subsidies, Australia asserts that the European Communities has neglected to conduct a comparison to determine whether the terms of the financial contribution are more advantageous than those available on the market.[1199] The European Communities merely asserts that tax assistance is, by definition, not available on the market and consequently concludes that the tax assistance constitutes an advantage on non-market terms.[1200]

[1192] United States' comments on European Communities' response to question 124, para. 72.
[1193] United States' comments on European Communities' response to question 124, para. 72.
[1194] See United States' response to question 13, para. 26, where the United States accepts that the B&O tax credit for computer software and hardware is a specific subsidy; United States' response to question 14, paras. 31-32, where the United States accepts that the B&O tax credits for preproduction development and for property taxes are subsidies under Article 1 of the SCM Agreement; United States' response to question 13, para. 27, where the United States accepts that the sales and use tax exemption for computer equipment is a subsidy. In relation to the tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption, the United States argues that no financial contribution exists and does not address the issue of benefit.
[1195] Australia's written submission, para. 5.
[1196] Australia's written submission, para. 8.
[1197] Australia's written submission, paras. 8 and 9.
[1198] Australia's written submission, para. 9.
[1199] Australia's written submission, para. 37.
[1200] Australia's written submission, para. 38.

BCI deleted, as indicated **[***]**

Australia argues that the assessment of whether a tax incentive confers a benefit requires a comparison with market benchmarks, namely the taxes that would otherwise be due.[1201]

Evaluation by the Panel

Whether a financial contribution exists in relation to each of the measures

7.115 The issue before us is whether the tax measures enacted under HB 2294 constitute a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement, which provides:

> "1.1 For the purpose of this Agreement, a subsidy shall be deemed to exist if:
>
> (a)(1) there is a financial contribution by a government of any public body within the territory of a Member (referred to in this Agreement as "government"), i.e. where:
>
> …
>
> (ii) government revenue that is otherwise due is foregone or not collected (e.g. fiscal incentives such as tax credits)"

7.116 In *US – FSC*, the Appellate Body held that in determining if revenue "otherwise due" has been foregone, a comparison must be made between the revenue actually raised and the revenue that would have been raised "otherwise". The panel and the Appellate Body agreed that the basis of comparison in determining what would otherwise have been due "must be the tax rules applied by the Member in question".[1202]

7.117 The panel applied a "but for" test in determining whether revenue had been foregone that was "otherwise due". This involved examining the situation that would have existed but for the measure in question and determining whether there would have been a higher tax liability in the absence of the measure.[1203] The Appellate Body expressed some reservations about whether the "but for" test is an appropriate general test that should apply in all situations.[1204]

7.118 The Appellate Body reasoned:

> "{T}he word 'foregone' suggests that the government has given up an entitlement to raise revenue that it could otherwise have raised. This cannot, however, be an entitlement in the abstract, because governments, in theory, could tax *all* revenues. There must, therefore, be some defined normative benchmark against which a comparison can be made between the revenue actually raised and the revenue that would have been raised 'otherwise'…
>
> The Panel found that the term 'otherwise due' establishes a 'but for' test in terms of which the appropriate basis of comparison for determining whether revenues are 'otherwise due' is 'the situation that would prevail but for the measures in question'. In the present case, this legal standard provides a sound basis for comparison because it is not difficult to establish in what way the…income…would be taxed 'but for' the contested measure. However, we have certain abiding reservations about applying any legal standard, such as this 'but for' test, in the place of the actual treaty

[1201] Australia's response to question 10.
[1202] Appellate Body Report, *US – FSC*, para. 90.
[1203] Panel Report, *US – FSC*, para. 7.45.
[1204] Appellate Body Report, *US – FSC*, para. 91.

> language…It would, we believe, not be difficult to circumvent such a test…We observe, therefore, that, although the Panel's 'but for' test works in this case, it may not work in other cases." [1205]

7.119 In the corresponding compliance proceedings, the Appellate Body clarified that there may be situations where it is possible to apply a "but for" test, namely where the measure at issue is an "exception" to a "general" rule of taxation.[1206] However, a panel is not always required to identify the "general" rule of taxation. In many situations, it may be difficult to do so.[1207] In such circumstances:

> "Panels should seek to compare the fiscal treatment of legitimately comparable income to determine whether the contested measure involves the foregoing of revenue which is "otherwise due", in relation to the income in question…
>
> {T}he normative benchmark for determining whether revenue foregone is otherwise due must allow a comparison of the fiscal treatment of comparable income, in the hands of taxpayers in similar situations." [1208]

7.120 Therefore, the Appellate Body's analysis suggests that where it is possible to identify a general rule of taxation applied by the Member in question, a "but for" test can be applied. In other situations, the challenged taxation measure should be compared to the treatment applied to comparable income, for taxpayers in comparable circumstances in the jurisdiction in issue.

> Whether a financial contribution exists for those tax measures which the parties agree have been used by Boeing

7.121 Applying the guidance from the Appellate Body to the *Washington B&O tax reduction,* a review of the evidence before the Panel reveals that there is indeed a general rate of taxation applicable to manufacturing activities in the State of Washington and that the tax reduction provided to aircraft manufacturing activities constitutes an exception to this rule.

7.122 The *Revised Code of Washington*, Section 82.04.240, is entitled "Tax on manufacturers" and provides:

> *"Upon every person* engaging within this state in business as a manufacturer, *except* as persons taxable as manufacturers under other provisions of this chapter, as to such persons the amount of the tax with respect to such business shall be equal to the value of the products, including byproducts, manufactured, multiplied by the rate of 0.484 percent." [1209]

7.123 Therefore, on its face, the Washington tax code establishes a general rule that applies to "every person engaging…in business as a manufacturer". It also allows for certain exceptions to this rule, which are set out in other provisions of the same chapter. The exceptions include lower taxation rates for manufacturers of semiconductor materials, manufacturers of wheat into flour and manufacturers of bio-diesel and alcohol fuel, for example.

7.124 Similar provisions apply in relation to taxes on wholesaling and retailing activities. The Revised Code of Washington 82.04.270 provides:

[1205] Appellate Body Report, *US – FSC,* paras. 90-91.
[1206] Appellate Body Report, *US – FSC (Article 21.5 – EC),* para. 91.
[1207] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, para. 91.
[1208] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, paras. 91 and 98.
[1209] Wash. Rev. Code § 82.04.240 (2004), Exhibit EC-83 (emphasis added).

> *"Upon every person* engaging within this state in the business of making sales at wholesale, *except* persons taxable as wholesalers under other provisions of this chapter; as to such persons the amount of tax with respect to such business shall be equal to the gross proceeds of sales of such business multiplied by the rate of 0.484 percent." [1210]

Similarly, the Revised Code of Washington 82.04.250 provides:

> "(1) *Upon every person except* persons taxable under {HB 2294}, 82.04.272, or subsection (2) of this section engaging within this state in the business of making sales at retail, as to such persons, the amount of tax with respect to such business shall be equal to the gross proceeds of sales of the business, multiplied by the rate of 0.471 percent." [1211]

7.125 The effect of HB 2294 is to include commercial aircraft manufacturing, and the manufacturing of components for such aircraft, within the list of activities that are subject to a taxation rate that differs from the rate of 0.484 per cent. It also includes wholesale and retail sales by such manufacturers within the exceptions to the rates of 0.484 per cent and 0.471 per cent respectively.

7.126 The terminology employed in HB 2294 provides support for the notion that there is a general taxation rate applicable to manufacturing activities and that deviations from this are an exception. For example, in section 16(2)(a) and (b) of HB 2294, the tax rate applicable to manufacturers of commercial aircraft and components for such aircraft is referred to as a "preferential tax rate".[1212] This provides further confirmation that there is a standard rate from which the aircraft manufacturing rate deviates in order to give preference to such manufacturers.

7.127 Further, section 16 of HB 2294 establishes that aerospace manufacturers that make use of the "preferential tax rate" must submit an annual report in order to provide the legislature with "information on how the tax incentive is used". Section 16(b) provides that if a manufacturer fails to submit an annual report:

> "{T}he department shall declare the amount of taxes … reduced in the case of the preferential business and occupation tax rate, for that year to be immediately due and payable." [1213]

This provides further support for the conclusion that the reduced rate is an exceptional rate, and if certain requirements are not met, the amount by which the taxes were reduced must be repaid. The Final Bill Report on HB 2294 reiterates the repayment requirement but includes a more explicit statement that the reduced rate is a deviation from the generally applicable rate. In particular, it provides that if the reporting requirements are not met "full taxes" will be immediately due and payable.[1214] The MSA also employs the terminology "full taxes".[1215] Given the structure of the Washington tax code, we interpret the reference to "full taxes" to be a reference to the rate generally applicable to manufacturers, set out in *Revised Code of Washington*, Section 82.04.240, which was

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[1210] Wash. Rev. Code § 82.04.270 (2004), Exhibit EC-88 (emphasis added).
[1211] Wash. Rev. Code § 82.04.250 (2003), Exhibit EC-87 (emphasis added).
[1212] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1213] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1214] Final Bill Report, HB 2294, undated, Exhibit EC-90, p. 3.
[1215] Exhibit B-1 to MSA. Exhibits to the Project Olympus Master Site Development and Location Agreement Between the Boeing Company and the State of Washington, County of Snohomish, City of Everett and Certain Other Governmental Units and Authorities of or in the State of Washington, 19 December 2003 ("Exhibits to MSA"), Exhibit EC-59.

also applicable to aircraft manufacturers prior to the enactment of HB 2294, namely 0.484 per cent (and 0.471 per cent in relation to retail activities).

7.128 In addition to the terminology used in HB 2294, there are various other documents produced by the State of Washington that use similar language. For example, the *Washington Administrative Code* 458-20-136, which "explains the application of the business and occupation (B&O) … taxes to manufacturers", refers to B&O tax rates that differ from the rate of 0.484 per cent as "special B&O tax rates/classifications for manufacturers engaging in certain manufacturing activities".[1216] Further, the "Project Olympus Legal Questionnaire, Washington State Response" refers to the reduced taxation rate for manufacturers of commercial airplanes and components as a "preferential B&O tax rate".[1217]

7.129 The United States' written submissions and a number of documents produced by the State of Washington refer to "four major activity classifications and tax rates" or "four principal tax classifications", namely manufacturing, wholesaling, retailing and services.[1218] These four rates "account for 90 percent of total B&O tax liability".[1219] This confirms that the B&O manufacturing rate is a standard rate and using it as a benchmark in the Article 1.1(a)(1)(ii) analysis is not equivalent to randomly picking one of the 36 possible activity classifications, as suggested by the United States.

7.130 In an attempt to rebut a European Communities' argument regarding specificity, the United States submitted an extract from a study prepared by the Washington State Department of Revenue, entitled "A Study of Tax Exemptions, Exclusions, Deductions, Deferrals, Differential Rates and Credits for Major Washington State and Local Taxes".[1220] The study describes each of the "differential tax rates" under the B&O tax system. In relation to the tax rate for manufacturers of commercial aircraft, the document provides (emphasis added):

> "A *preferential tax rate* is provided for manufacturers of commercial airplanes or components of commercial airplanes. Compared with the *general tax rate for manufacturing of 0.484 percent*, this statute allows a two-step reduction in the tax rate." [1221]

The study also appears to answer the "but for" test discussed in the panel and Appellate Body reports in *US – FSC*:

> "If the exemption were repealed, would the taxpayer savings be realized as increased revenues?
>
> Yes; if the industry remains in this state and final assembly of the super-efficient airplane occurs here." [1222]

In other words, but for the exemption for aircraft manufacturers, increased taxation revenue would otherwise be due to the State.

[1216] Wash. Admin. Code § 458-20-136 (2000), Exhibit EC-80, s5.

[1217] Schedule 2 to Project Olympus Master Site Agreement, Project Olympus Legal Questionnaire Washington State Response, 3 October 2003, Exhibit EC-91, p. 3.

[1218] See for example, Business and Occupation Tax, RCW 82.04, Exhibit US-179 and United States' first written submission, para. 430.

[1219] Business and Occupation Tax, RCW 82.04, Exhibit US-179.

[1220] Business and Occupation Tax - Differential Tax Rates, Exhibit US-191. See also, United States' response to question 365.

[1221] Business and Occupation Tax - Differential Tax Rates, Exhibit US-191 at description of 82.04.260(13).

[1222] Business and Occupation Tax - Differential Tax Rates, Exhibit US-191 at description of 82.04.260(13).

7.131 In describing other differential B&O tax rates, the same Department of Revenue document continues to refer to the "normal" or the "general" manufacturing tax rate of 0.484 per cent.[1223]

7.132 Therefore, the State of Washington legislation and documents produced by State departments confirm the European Communities' argument that there is a general or "normal" B&O tax rate of 0.484 per cent for manufacturing and wholesaling activities and that deviations from this rate are an exception or a "preferential" rate. Similarly, the text of the *Revised Code of Washington* and some of the other evidence surveyed in the foregoing analysis, including section 16 of HB 2294, indicate that the rate reduction from 0.471 per cent in relation to retail sales is also a "preferential rate".

7.133 In these circumstances, where it is not difficult to identify a general rule of taxation and exceptions to it, the guidance provided by the Appellate Body suggests that a "but for" test can be applied. The relevant question is whether, "but for" the challenged tax reduction, a higher B&O tax rate would otherwise apply to manufacturers of commercial aircraft and their components. The answer to this question is in the affirmative. The standard rate for manufacturing and wholesaling activities is 0.484 per cent and for retailing activities is 0.471 per cent. Were it not for the "preferential rate" introduced by HB 2294, aircraft manufacturers would be subject to the rates of 0.484 per cent for manufacturing and wholesaling and 0.471 per cent for retail sales. For these reasons, the Panel finds that the reductions in the B&O tax rates constitute the foregoing of revenue otherwise due and, as a result, are a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement.

7.134 The Panel is not convinced by the United States' argument that there is no rational basis to use the rate of 0.484 per cent as the normative benchmark in relation to the tax rate on manufacturing activities. Rather than being just one rate within a range of rates, as argued by the United States, the evidence reveals that it is the standard manufacturing rate that applies unless there is an exception to it.

7.135 The United States advocates use of the analysis suggested by the Appellate Body when there is no general rule of taxation, namely comparing the fiscal treatment of legitimately comparable income. For this purpose, the United States advocates the use of the range of nominal B&O tax rates as the "defined normative benchmark". A problem with using such a "defined normative benchmark" is that, by definition, every rate in any multi-rate tax system falls within the range of rates in that tax system. The United States' approach suggests that if there is a change to a taxation rate, as long as the new rate is the same as or higher than the lowest rate in the Washington B&O tax system, it falls within the "range" of tax rates. As a result, the approach advocated by the United States results in the lowest B&O tax rate at any given point in time becoming the "general rule" for the purposes of an Article 1.1(a)(1)(ii) analysis. Therefore, in advocating that the range of nominal B&O tax rates be the defined normative benchmark, the United States is effectively arguing that the rate of 0.138 per cent, the lowest existing B&O tax rate on manufacturing activities at the time of making its submissions, be the benchmark. The United States does not explain why the rate of 0.138 per cent is "normative" or where it is "defined".[1224]

[1223] Business and Occupation Tax - Differential Tax Rates, Exhibit US-191.

[1224] We note that at the time the United States made its written submissions, the lowest nominal B&O tax rate was 0.138 per cent. However, the United States indicates in its first written submission, para. 431, that as of 1 July 2006, manufacturing fresh fruit and vegetables and manufacturing dairy products were to be tax exempt. This further illustrates the problematic nature of the United States' argument. The result of the amendment is that the lower bound of the range of nominal B&O tax rates is 0 per cent. Therefore, every tax rate falls within the range and it is never possible for a tax reduction to constitute a financial contribution.

7.136 Further, it is difficult to conclude that the range of B&O tax rates is a "defined normative" benchmark. It is not a "defined" benchmark because, as new rates are established, the benchmark shifts. Further, it is not "normative" because there is nothing prescriptive about it. In no sections of the Washington tax code or in the documents produced by Washington State and submitted by the parties as exhibits, is there evidence to suggest that the B&O tax rates must always fall between 0.138 per cent and 3.3 per cent (the actual range of tax rates on manufacturing activities in existence at the time the parties made their submissions).

7.137 The United States advances its arguments regarding the average effective B&O tax rate merely as support for its conclusion that revenue otherwise due has not been foregone. We have concluded to the contrary and any consideration of the average effective B&O tax rate does not alter our decision. The United States itself concedes that the average effective B&O tax rate is not a normative benchmark by which to contrast the fiscal treatment afforded to legitimately comparable income. Therefore, whether or not the B&O tax reduction for aircraft manufacturing draws the effective tax rate paid by such manufacturers closer to the average effective tax rate is not relevant to the analysis required by the Appellate Body report in *US – FSC*.

7.138 We note the United States' argument that 60 per cent of total taxable income in Washington State receives an adjusted rate of taxation. However, as the European Communities points out, this calculation includes the aerospace industry, the largest manufacturing industry in Washington State, which is subject to an adjusted rate of taxation.[1225] In contrast, the European Communities' calculations exclude the $36 billion aerospace sector[1226] and find that, excluding the aerospace industry, 20 per cent of manufacturing income is subject to an adjusted B&O tax rate.[1227] In other words, if HB 2294 had not adjusted the rate for aerospace manufacturing, approximately 80 per cent of manufacturing activities in Washington State would be subject to the 0.484 per cent tax rate. Therefore, the United States' submissions do not alter our finding that the reductions in the B&O tax rates constitute the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement.

7.139 The United States does not contest that the *B&O tax credits* and the *sales and use tax exemption for computer software, hardware and peripherals* have been claimed by Boeing and that each constitutes a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement. We note that the B&O tax credit system operates by subtracting an amount directly from the taxpayer's total B&O tax liability. Further, under the Washington tax system, absent the exemption, sales or use taxes would ordinarily be paid on computer equipment used by an airplane manufacturer. For these reasons, we find that each measure, namely the B&O tax credits and the sales and use tax exemption for computer software, hardware and peripherals, is a financial contribution under Article 1.1(a)1(ii) of the SCM Agreement.

> Whether a financial contribution exists for those tax measures in relation to which there is disagreement about whether the subsidies have been used by Boeing

7.140 In relation to the *sales and use tax exemption for construction services and equipment,* the United States argues that it is not a financial contribution because Boeing has not and will not use the exemption, a fact which the European Communities contests.

7.141 In assessing whether Boeing has indeed made use of the exemption, the principal issue of contention between the parties is whether Boeing has constructed any new buildings for use in the

[1225] European Communities' comments on United States' response to question 32, para. 125.
[1226] This figure finds support in Washington State Aerospace Industry Overview, Washington State Website, Exhibit EC-1322.
[1227] European Communities' comments on United States' response to question 32, para. 125.

manufacture of the 787 that would render it eligible for the sales and use tax exemption for construction services and equipment. We agree with the European Communities' argument that Boeing's choice to use its existing Everett site for the purposes of 787 assembly is not conclusive of the issue. This is because, as the European Communities notes, Boeing could construct new buildings on the "parcels of land" that are included as a part the site chosen by Boeing for the manufacture of the 787.[1228]

7.142 The European Communities' estimate that the benefit to Boeing over the period 2004-2005 of the sales and use tax exemption for construction services and equipment was $9.6 million is drawn from the Washington State September 2003 presentation.[1229] This presentation, prepared before Boeing decided to locate in Washington State, outlines the advantages to Boeing of locating in Everett or in Moses Lake.[1230] In the context of considering the advantages associated with the Everett site, the State estimates that Boeing will claim a sales and use tax exemption worth $9.6 million, on the assumption that Boeing will invest in a new paint hangar.[1231] Although this is merely an assumption about the future construction decisions of Boeing, the beginning of the presentation includes a statement that "we have been working with Boeing over the past two months to provide detailed information on Moses Lake and Everett, gain further insight on the 7E7 programme and site needs, and develop a collaborative, effective program to make the 7E7 a success."[1232] This reveals that the State's estimate is based upon an indication from Boeing of site needs for a 787 assembly facility.

7.143 However, the United States submits a spreadsheet prepared by the Washington Department of Revenue (Exhibit US-184), entitled "HB 2294 Fiscal Note – 20 Year Spreadsheet", which was updated on 1 November 2005, and which therefore provides more recent estimates of the amount of the tax incentives claimed by Boeing compared with the September 2003 presentation.[1233] Further, unlike the 2003 presentation, the Department of Revenue spreadsheet post-dates the signing of the MSA and was updated post-2004, which is one of the years the European Communities alleges the tax exemption conferred a benefit on Boeing. The spreadsheet, which appears to be an attempt to estimate the total fiscal impact of HB 2294, does not include any amounts for a sales and use tax

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[1228] European Communities' comments on United States' response to question 239.

[1229] For $9.6 million estimate, see State and Local Subsidies to Boeing LCA Division, Exhibit EC-27. The source of this estimate is Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65. Exhibit EC-65 p. 54, sets out the assumptions upon which the estimate for the claim of the sales and use tax exemption in Everett is based and the Appendix (pages unnumbered) includes a table (heading at the top of the page is "Everett Incentives Values 9/16/2003") which estimates the "Retail Sales Tax (RST) and Use Exemption: Construction of new buildings for manufacture of Comm Air", based upon the assumption of a new paint hangar. The table estimates that the tax exemption will provide a benefit to Boeing of $3.7 million in 2004 and $5.8 million in 2005.

[1230] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65. See e.g. index at p. 2, which indicates that the presentation details the "advantages and actions" relating both to Everett and Moses Lake.

[1231] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65. Exhibit EC-65 p. 54, sets out the assumptions upon which the estimate for the claim of the sales and use tax exemption in Everett is based and the Appendix (pages unnumbered) includes a table (heading at the top of the page is "Everett Incentives Values 9/16/2003") which estimates the "Retail Sales Tax (RST) and Use Exemption: Construction of new buildings for manufacture of Comm Air", based upon the assumption of a new paint hangar.

[1232] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65, p. 3.

[1233] The bottom left of the second page of Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184, includes the date of update (namely, 11.1.05, which we assume is written in the month/day/year format, as is customary in the United States).

exemption in Everett. It gives an amount of $0 to the "sales tax exemption for construction of new buildings (Moses Lake)". If Boeing did indeed claim the sales and use tax exemption for construction services, it would be reasonable to expect this to be reflected in the Department of Revenue spreadsheet. In addition to this evidence, we also rely on the declaration of the United States in its first written submission that "Boeing has not used … this tax exemption … {and}Boeing informs us that it has no plans to construct any such buildings {i.e. buildings to which the tax exemption applies} in the future".[1234]

7.144 Therefore, after reviewing all of the evidence, we accept the United States' position that Boeing has not claimed the sales and use tax exemption for construction services and equipment. We recognize that the Department of Revenue spreadsheet indicates that the B&O tax credit has been claimed by Boeing for taxes paid on "new construction related to the 7E7 plane" and that the European Communities argues that such "new construction" would render Boeing eligible for the sales and use tax exemption for construction services and equipment.[1235] However, the "new construction" may refer to "renovation" or "expansion" of existing buildings, to which the B&O tax credit applies, but the sales and use tax exemption for construction services and equipment does not. On balance, given that the other tax incentives under HB 2294 which have benefited Boeing are all reflected in the Department of Revenue spreadsheet, we conclude that the absence of an estimate for the sales and use tax exemption for construction services in Everett confirms that it was not claimed by Boeing.

7.145 In relation to the *leasehold excise tax exemption* and the *property tax exemption,* the European Communities' position is that a sale-leaseback arrangement exists or will exist between Boeing and a port district, thereby entitling Boeing to claim the leasehold excise tax exemption and the property tax exemption. In this regard, the European Communities relies upon the MSA, which provides that, if requested by Boeing, the Port of Everett, to the extent it has financial capacity, shall engage in a sale-leaseback arrangement with Boeing.[1236] In addition, the European Communities refers to the "Restatement of Commitments", attached as a Schedule to the MSA, which provides that "the Port of Everett will purchase approximately nine acres of Boeing land and leaseback to Boeing for 20 years".[1237]

7.146 We are not convinced that the sections from the MSA and its Schedule upon which the European Communities relies establish that Boeing and a port district have engaged in a sale-leaseback arrangement. Article 5.2.2 of the MSA contemplates the possibility of a sale-leaseback transaction occurring, but it does not require such an arrangement or establish that one is in place. The "Restatement of Commitments", which is attached as Schedule 3 to the MSA, is more prescriptive in its language, stating that the Port of Everett *will* buy Boeing's land and lease it back to Boeing.[1238] However, the "Restatement of Commitments" is in fact the submission by the Governor of Washington outlining the State's offer to site the Boeing 787 manufacturing facility in Washington.[1239] The submission lists the benefits to Boeing of choosing to site the 787 assembly facility in Everett and one of the listed "actions {of the State} to support the 7E7 Dreamliner" is that

[1234] United States' first written submission, para. 504.
[1235] European Communities' comments on United States' response to question 239, para. 239.
[1236] European Communities' comments on United States' response to question 239, para. 338 and MSA, Article 5.2.2, Exhibit EC-58.
[1237] European Communities' first written submission, para. 125 and Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71, p. 6.
[1238] Schedule 3 to Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71, p. 6.
[1239] Schedule 3 to Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71, see p. 1.

Port of Everett will engage in a sale-leaseback arrangement with Boeing.[1240] At a time when Boeing had not yet decided to locate in Washington State, and where the relevant section of the submission reads like an offer or a list of possibilities, the Restatement of Commitments does not amount to an agreement between Boeing and the Port of Everett to engage in a sale leaseback transaction.[1241]

7.147 In our view, we do not have sufficient evidence before us to conclude that Boeing has engaged in a leasing arrangement with a port authority and that it is consequently receiving either the leasehold excise tax exemption or the property tax exemption. The Washington State Department of Revenue spreadsheet, which the European Communities relies upon as the most current source of information in quantifying the amount of other taxation measures, such as the B&O tax credits, attributes an amount of zero to both tax exemptions.[1242] Further, the United States makes a declaration in its written submissions that "Boeing has not entered and informs us it does not intend to enter, a sale-leaseback arrangement for its 787 assembly facilities".[1243]

7.148 Although we accept the European Communities' view that Boeing could potentially engage in a sale-leaseback transaction under the terms of the MSA, in the light of the Department of Revenue spreadsheet and the declaration from the United States regarding Boeing's actions, we are not convinced that Boeing is in fact involved in such a leasing arrangement. Further, we have accepted the arguments and evidence relied upon by the European Communities demonstrating that Boeing received the B&O property tax credit from the time the tax credits and tax exemptions became available in 2005 through 2006. Given that sections 13 and 14 of HB 2294, which provide for the leasehold excise and the property tax exemptions, both state that "a person taking the {property tax credit} is not eligible for the exemption under this section", the position advocated by the European Communities is in fact not legally possible. If, as the European Communities has demonstrated, Boeing received the B&O tax credit for property taxes from the time the tax incentives became available until the final year of relevance to our serious prejudice analysis (2006)[1244], it is not possible under the terms of HB 2294 that Boeing also benefited from the leasehold excise and the property tax exemptions in the same years. The European Communities appears to recognize this in Exhibit EC-27, where it argues that Boeing is receiving the leasehold excise and the property tax exemptions and that Boeing does not receive the B&O property tax credit because "sections 13 and 14 of HB 2294 provide that an entity taking the B&O tax credit for property taxes cannot claim the leasehold excise tax exemption or the property tax abatement".[1245] However, when the European Communities updates its quantification of the subsidies in its second written submission to reflect its revised position that Boeing does in fact benefit from the B&O credit for property taxes, the European Communities does

[1240] Schedule 3 to Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71, pp. 5 and 6.

[1241] Similarly, we note that the Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65, contemplates the possibility of a sale-leaseback arrangement between Boeing and a port authority. However, the presentation was prepared at a time when Boeing had not yet decided to locate in Everett and it sets out a number of scenarios to quantify the advantages to Boeing of locating in Everett or in Moses Lake, including the scenario where Boeing participates in a sale-leaseback arrangement. Therefore, the presentation does not demonstrate that Boeing actually chose to engage in such a leasing transaction.

[1242] Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184. See European Communities' second written submission, para. 68 for an example of the European Communities relying on Exhibit US-184 as the most current source of information for the purposes of quantifying the amount of the subsidies to Boeing.

[1243] United States' first written submission, para. 504.

[1244] See analysis at paras. 7.1676-7.1679 of this Report.

[1245] State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, footnote 4.

not adjust the quantification of the tax exemptions to reflect the impossibility of simultaneously receiving all three subsidies.[1246]

7.149 Therefore, the situation before us is that while HB 2294 provides for a sales and use tax exemption for construction services and equipment, a leasehold excise tax exemption and a property tax exemption, these exemptions have not been used by Boeing (or indeed by any other entity, ruling out the possibility of an argument that the benefit arising from the financial contribution passes-through to Boeing).

7.150 The European Communities attempts to demonstrate that each of the measures under HB 2294 satisfies the Article 1 definition of a subsidy for the purposes of its serious prejudice and prohibited subsidy claims. In the Panel's view, the European Communities' serious prejudice claim is based upon use of the subsidies in issue by a particular entity, namely Boeing. In relation to the three taxation measures that have never been used, the European Communities does not argue that they constitute financial contributions in the abstract. Rather, the European Communities' position is that each measure is a financial contribution *to Boeing*. The European Communities' evidence and arguments are directed at demonstrating that *Boeing* has engaged in particular property-related activities, such as constructing new buildings and entering a sale leaseback agreement with a port authority. Similarly, the European Communities' case under Article 3 of the SCM Agreement is that there is an export contingent subsidy *to Boeing*. It presents evidence and arguments in an attempt to demonstrate that the grant of HB 2294 was contingent upon Boeing's exports, rather than exports in general. Therefore, in the context of the Article 3 analysis, the European Communities relies upon the same arguments to demonstrate the existence of a subsidy as it does for its serious prejudice case, namely that *Boeing* constructed new buildings for use in the manufacture of the 787 and entered a sale-leaseback agreement, rendering Boeing eligible for the tax exemptions.

7.151 Therefore, in the Panel's view, the European Communities' argument is not that a financial contribution exists in the abstract, by virtue of the existence of legislation providing for a tax abatement that has in fact never been used. Rather, the European Communities' case is that there is a financial contribution to a specific entity, namely *to Boeing*. For these reasons, in circumstances where the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption have never been claimed by Boeing, and in fact Boeing has taken steps that suggest that it will not claim the exemptions, the Panel finds that there is no financial contribution to Boeing in relation to these three measures.

Revenue to be foregone in the future

7.152 We recall the United States' argument that when the financial contribution associated with an alleged subsidy is the foregoing of government revenue under Article 1.1(a)(1)(ii), the amount of the financial contribution must be limited to revenue that has *actually* been foregone.[1247] According to the United States, revenue that a government may potentially forego in the future does not constitute a financial contribution under Article 1.1(a)(1)(ii).[1248] The United States is not entirely clear about whether its argument on this point relates to the existence or the amount of the alleged subsidy. In

[1246] The European Communities updates its quantification of the B&O tax credits in its second written submission, para. 68. It does not provide a similar update in relation to the leasehold excise tax exemption or the property tax exemption. We note that in the European Communities' response to question 363, paras. 166-174, the European Communities argues that Boeing could simultaneously take advantage of all three tax measures if Boeing were to set up two different legal persons, one eligible for the B&O tax credit and the other for the leasehold excise and property tax exemptions. Even if this is the correct interpretation of HB 2294, the European Communities has not attempted to demonstrate that Boeing has indeed set up different legal persons in this manner.

[1247] United States' first written submission, para. 462.

[1248] United States' first written submission, para. 462.

response to Panel questioning, the United States submits that Article 1.1(a)(1)(ii) addresses the existence rather than the amount of a subsidy.[1249] In the same response, the United States argues that where the financial contribution of an alleged subsidy consists of government revenue to be foregone in the future, this does not meet the Article 1 definition of a subsidy. The United States continues that "{w}hether a measure results in a financial contribution is one of the elements in the analysis of whether there is a subsidy and the amount of the subsidy. Because possible future revenue foregone cannot be considered a financial contribution, it cannot be considered a subsidy or be included in the subsidy amount".[1250] Although the continued reference to subsidy amount creates some confusion, the United States' argument rests purely on Article 1.1(a)(1)(ii), which the United States concedes addresses the existence rather than the quantification of a subsidy. Therefore, the United States' argument is that where revenue is to be foregone in the future, this is not a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement and therefore cannot constitute a subsidy.

7.153 At the outset, we note that in referring to revenue to be foregone in the "future", the parties are referring to revenue to be foregone in the period post-2006. The European Communities filed its first written submission in March 2007. In calculating the amounts of the alleged subsidies in its first written submission, the European Communities treats 2006 as the cut-off point for the "past" and the "future".[1251] Therefore, the European Communities' calculations for the period post-2006 are estimates of financial contributions expected to be received in the "future" and in relation to which there is no evidence on the record to indicate that the subsidies have actually been received. Therefore, for the purposes of this dispute, the period post-2006 is treated as the "future".

7.154 We do not find it necessary to resolve the issue of whether revenue to be foregone in the period post-2006 constitutes a financial contribution. The Panel needs to address the question of whether the measures under HB 2294 are subsidies for the purposes of assessing the European Communities' serious prejudice and Article 3 claims. As explained in the following paragraphs, in the circumstances of this case, the Panel does not rely upon tax abatements to be received post-2006 in assessing the European Communities' present serious prejudice case. Further, given the Panel's decision to exercise judicial economy in relation to that aspect of the European Communities' serious prejudice case based on threat, it is not necessary for the Panel to resolve the issue of whether revenue to be foregone in the future constitutes a financial contribution for the purposes of the threat of serious prejudice analysis. Finally, given the Panel's finding that the European Communities has not established its Article 3 claim in relation to HB 2294[1252], there is no need for the Panel to resolve whether the post-2006 tax reductions are subsidies for the purposes of this claim. In conclusion, it is not necessary for the Panel to rule upon whether revenue to be foregone in the period post-2006 constitutes a financial contribution.

7.155 The Panel notes that in its "present" serious prejudice analysis the European Communities relies upon post-2006 amounts in only one manner. In particular, as part of ITR's allocation of subsidy amounts over time to arrive at estimates of per-LCA subsidy "magnitudes", the European Communities allocates the value of recurring subsidies that reduce Boeing's marginal unit costs, namely the Washington and City of Everett B&O tax reductions, the waiver of the 747 Large Cargo

[1249] United States' response to question 125, para. 47. In addition, and more generally, see the parties' responses to question 1.

[1250] United States' response to question 125, para. 47.

[1251] See e.g. Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, in which the European Communities splits its calculations of the subsidy values into a "past amounts" column (1989-2006) and a "future amounts" column (2007-2024). We note that in responding to question 311, the European Communities states that because 2007 is no longer a year in the future, the Panel could consider including the subsidies received in 2007 in the present serious prejudice analysis. However, in assessing the present serious prejudice case, the Panel assesses the effects of the subsidies through 2006, rather than extending the analysis to 2007.

[1252] See para. 7.1590 of this Report.

Freighter ("the 747 LCF") landing fees in Washington and the FSC/ETI measures, to the year that an LCA is ordered, even though Boeing receives the subsidies only at the time of delivery.[1253] In allocating the recurring subsidies that reduce marginal costs in this manner, the European Communities deems the year of order to be three years prior to the year of delivery.[1254] Therefore, the European Communities allocates the recurring subsidies that reduce marginal unit cost to the year three years prior to their receipt.[1255] As indicated at paragraphs 7.1676-7.1679 of this Report, the Panel considers it appropriate to assess the European Communities' present serious prejudice claim by examining the effects of the subsidies over the period 2004-2006. The European Communities' method for allocating the subsidies over time is such that the only post-2006 amounts it would allocate to the 2004-2006 period are the amounts of the recurring subsidies that reduce marginal unit cost expected to be received in the years 2007, 2008 and 2009 (i.e. up to three years beyond 2006). For other subsidies apart from the recurring subsidies that reduce marginal unit cost, the annual subsidy "magnitude" is either the "subsidy amount in {the} same year" (for recurring subsidies that increase Boeing's non-operating cash flow) or the amount resulting from the allocation of non-recurring subsidies over a period of years commencing from the year of receipt of the subsidy.[1256]

7.156 The upshot is that if the European Communities' method of allocating the subsidies over time were accepted, the reliance upon post-2006 amounts in the present serious prejudice analysis would be limited to certain "subsidies" (the Washington B&O tax reduction, the City of Everett B&O tax reduction, the waiver of 747 LCF landing fees in Washington and the FSC/ETI measures) expected to be received in 2007, 2008 and 2009. The European Communities does not rely upon the post-2006 amounts that it has calculated for other subsidies and for other years (i.e. the amounts calculated for 2010-2024) in its present serious prejudice claim.[1257] Given our finding that the European Communities has not demonstrated that the waiver of the 747 LCF landing fees is a subsidy[1258] and that the European Communities treats the expected amount of the FSC/ETI subsidies post-2006 to be

[1253] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, Table 4,, "Subsidy Magnitude by Subsidy Program", p. 1.

[1254] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, paras. 4-7 and 35.

[1255] This is confirmed by Table 4 in International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13. Table 4 indicates that the European Communities' use of subsidies received post-2006 in its present serious prejudice analysis is restricted to recurring subsidies that reduce Boeing's marginal unit cost, namely, the Washington B&O tax reduction, the City of Everett B&O tax reduction, the waiver of 747 LCF landing fees in Washington and the FSC/ETI measures. The column in Table 4 entitled "derivation of subsidy magnitude" indicates that for recurring subsidies that reduce Boeing's marginal unit cost, the "subsidy amount 3 years hence" provides the subsidy magnitude for each year.

[1256] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Table 4. The reference to Table 6 in the "derivation of subsidy magnitude" column in Table 4 is a reference to the tables allocating non-recurring subsidies over a period of years.

[1257] The European Communities confirms that this is the case in its response to question 372, para. 262. See also, European Communities' response to question 76, para. 291, where the European Communities states:

"…This 'Future Amount' column is provided for summary purposes. The European Communities does not rely on all of the annual future amounts as evidence for establishing its claim of present serious prejudice, and threat thereof… ."

Further, in European Communities' response to question 310, the European Communities states that "the 2011 to 2024 data is not directly relevant to the European Communities' claim of present serious prejudice and threat of serious prejudice" (the European Communities relies upon a "reference period" of 2007-2010 for its threat of serious prejudice case, explaining why it views the subsidy values up until 2010 as relevant to its serious prejudice arguments).

[1258] See analysis commencing at para. 7.501.

BCI deleted, as indicated **[***]**

$0[1259], if the Panel were to apply the European Communities' methodology for the present serious prejudice analysis, the only post-2006 subsidy amounts that would be incorporated into the analysis would be the B&O tax reductions expected to be received in 2007-2009.

7.157 However, the Panel does not consider it necessary to arrive at a per-aircraft subsidy "magnitude" in its serious prejudice analysis. It is for the purpose of calculating such "magnitudes" that the European Communities allocates the recurring subsidies that reduce marginal unit cost in the manner that it does.[1260] The Panel's present serious prejudice analysis considers the effects of the B&O and the FSC/ETI tax reductions by considering the taxation savings that Boeing actually realized in 2004-2006 arising from aircraft deliveries during that period.[1261] In contrast to the European Communities' serious prejudice analysis, taxation savings to be realized in the period post-2006 do not play a part in the Panel's analysis. Therefore, in considering the European Communities' present serious prejudice claim, there is no need to resolve the question of whether revenue to be foregone in the "future" constitutes a financial contribution because taxation savings to be realized in the post-2006 period play no part in the Panel's analysis.

7.158 In conclusion, revenue to be foregone post-2006 does not play a role in the Panel's analysis of the parties' arguments regarding present serious prejudice and the Panel exercises judicial economy in relation to threat of serious prejudice.[1262] Further, the Panel does not accept the European Communities' Article 3 claim in relation to the HB 2294 measures.[1263] For these reasons, the Panel does not find it necessary to resolve the question of whether revenue to be foregone in the "future" can constitute a financial contribution.

Argument in the alternative

7.159 The European Communities makes what it labels an "argument in the alternative", which it directs the Panel to consider only in the event that the Panel concludes that a financial contribution under Article 1.1(a)(1)(ii) does not exist in relation to any of the measures under HB 2294.[1264] Given our conclusion that the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption do not constitute financial contributions under Article 1.1(a)(1)(ii), it is necessary for the Panel to evaluate the European Communities' "argument in the alternative".

7.160 In relation to the "argument in the alternative", the principal point of contention between the parties is whether a "potential direct transfer of funds" can only exist when a direct transfer of funds is required upon the occurrence of a "triggering event" or condition, or whether it can be found to exist where a potential direct transfer of funds is one of a number of possible consequences following the fulfilment of a pre-defined condition. Previous panel and Appellate Body reports regarding the meaning of potential direct transfer of funds do not provide any guidance on this point. In fact, the focus of previous reports is on the meaning of the benefit arising from a potential direct transfer of funds.[1265]

[1259] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, indicates that the expected amount of the FSC/ETI measure post-2006 is $0.

[1260] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, Table 4, "Subsidy Magnitude by Subsidy Program".

[1261] See paras. 7.1812-7.1813 of this Report.

[1262] See para. 7.1851of this Report.

[1263] See para. 7.1590 of this Report.

[1264] European Communities' response to question 124, para. 84.

[1265] Panel Report, *Brazil – Aircraft,* paras. 7.68-7.69; Appellate Body Report, *Brazil – Aircraft,* para. 157 and Panel Report, *Canada – Aircraft Credits and Guarantees,* paras. 7.344-7.345.

7.161 The parties appear to agree that if the Public Parties to the MSA do not honour the commitments "guaranteed" under the MSA, a direct transfer of funds is just one of the potential outcomes. In fact, the terms of Article 10.4.1 provide that if a commitment is not honoured, the Public Parties will provide something with "economic effect equivalent" to the commitment which was reneged upon. Therefore, the MSA does not even explicitly state that a transfer of funds to Boeing is one of the possible consequences if the government is unable to fulfil one of its original commitments. However, given the focus on the "economic effect" of the remedy, it is conceivable that one of the ways the Public Parties could satisfy Article 10.4.1 of the MSA is by directly transferring funds to Boeing.

7.162 With respect to the United States' argument that Article 10.4.1 imposes no obligation upon the Public Parties because it is subject to the "best efforts" and "to the extent permitted by law" conditions, we note that failure by the Public Parties to provide a commitment or obligation of equivalent economic effect is considered to be a breach of the MSA, regardless of whether best efforts were used and regardless of whether the government was constrained by law in the alternative commitments it could provide. This is because Article 10.4.1 of the MSA provides that the Public Parties *shall* provide Boeing with "an exemption from the law as so changed or otherwise with another obligation or commitment acceptable to Boeing and having economic effect equivalent to the commitment so lessened or removed". Failure to provide such an exemption or commitment "shall be a substantial impairment" of the MSA. Therefore, the "best efforts" or the "extent permitted by law" conditions are not a means by which the government is released from its obligation to provide a commitment of equivalent economic effect under Article 10.4.1. For these reasons, we are not convinced by the United States' submission that under Article 10.4.1 of the MSA the Public Parties are under no obligation to provide a direct transfer of funds or some other commitment of economic effect equivalent to the obligation lessened or removed.

7.163 Therefore, in our view, Article 10.4.1 of the MSA represents a promise by the Public Parties to provide Boeing with a direct transfer of funds or any number of other possible remedies of a certain economic value should it not be possible for the Public Parties to fulfil a commitment under the MSA. The European Communities suggests that because Article 11.2.1 of the MSA explicitly provides that Boeing may sue for damages if there is a breach of the MSA, including of the commitment under Article 10.4.1, this supports the notion that there is a potential direct transfer of funds. However, even if Article 11.2.1 were considered together with Article 10.4.1 as the provisions that create a potential direct transfer of funds, this would not change the principal question that arises in relation to the parties' submissions, namely whether a direct transfer of funds, as one of the possible consequences of satisfaction of a predefined condition, is sufficient to meet the definition of a financial contribution in Article 1.1(a)(1)(i) of the SCM Agreement. Whether Article 10.4.1 of the MSA is considered alone or together with Article 11.2.1, we note that a failure to provide the tax incentives identified in the MSA *may* result in a direct transfer of funds (i.e. as the commitment of equivalent economic effect provided by the Public Parties, or if Boeing sues the Public Parties and is awarded damages). However, in no circumstances is Boeing assured of a direct transfer of funds when the contingency in Article 10.4.1 of the MSA is met.

7.164 In this regard, we note that the definition of "potential" is "*possible* as opposed to actual, capable of coming into being or action; latent".[1266] On its face, this definition does not appear to exclude from the reach of Article 1.1(a)(1)(i) of the SCM Agreement the possible transfer of funds identified by the European Communities. However, accepting the European Communities' submissions on this issue would require a broad interpretation of potential direct transfer of funds. The European Communities' position is essentially that any time there is a possibility that the

[1266] *Shorter Oxford English Dictionary*, L. Brown (ed.) (Clarendon Press, 1993), Vol. II, p. 2302. This is confirmed by *Webster's New Encyclopedic Dictionary*, (Könemann, 1993), p. 788, which gives the definition of "potential" as "capable of becoming real ... something that can develop or become actual".

government will transfer funds in the future, upon the occurrence of a defined triggering event, this is a financial contribution. The contextual guidance provided by the example of a "potential direct transfer" in Article 1.1(a)(1)(i), namely a loan guarantee, suggests that this was not intended to be the case. A loan guarantee is a *commitment* by the government to assume responsibility for a loan when a defined set of circumstances arise. Therefore, the example chosen in Article 1.1(a)(1)(i) suggests that the mere *possibility* that a government may transfer funds upon the fulfilment of a pre-defined condition will not be enough to satisfy the definition of a financial contribution. In our view, a potential direct transfer of funds is a "possibility" due to uncertainty about whether the triggering event will occur, rather than uncertainty about whether the transfer of funds will follow once the pre-defined event has transpired.

7.165 The broad nature of the finding that the European Communities seeks is highlighted by the fact that the provision under the MSA that allegedly promises a possible transfer of funds does not even explicitly mention this possibility. Rather, it provides that an "obligation or Commitment" of a certain economic value will be provided to Boeing. If the Panel concludes that this is a potential direct transfer of funds, it may be possible to find, for example, that any time a government makes a general promise to provide assistance or support to an industry upon the occurrence of a defined triggering event, a financial contribution under Article 1.1(a)(1)(i) exists. This is because one possible means of providing assistance to an industry is through a direct transfer of funds. Further, if the Panel were to accept the European Communities' argument that the provision in the MSA which states that Boeing may sue the government for damages for breach of contract also supports a finding of a potential direct transfer of funds, this suggests that any time a government enters a contract a potential direct transfer of funds exists because, whether explicitly provided for or not, claiming damages for breach of contract is almost always a possibility.

7.166 Therefore, the Panel has considerable doubts about whether the term "potential direct transfer of funds" under Article 1.1(a)(1)(i) of the SCM Agreement is as broad as suggested by the European Communities. In any event, we do not consider it necessary to establish the outer limits of the meaning of the term because, as discussed in the following subsection of the Report, the European Communities has not demonstrated that a benefit to Boeing exists under Article 1.1(b) with respect to the alleged potential direct transfer of funds.

7.167 For these reasons, the Panel does not find it necessary to resolve whether a financial contribution exists under Article 1.1(a)(1)(i) of the SCM Agreement in relation to those measures not found to constitute a financial contribution in the form of Article 1.1(a)(1)(ii). Even if a potential direct transfer of funds exists, the European Communities has not demonstrated that it confers a benefit.

> Whether a benefit exists in relation to each of the measures found to give rise to a financial contribution

7.168 The benefit analysis under Article 1 of the SCM Agreement requires a comparison with the marketplace; the recipient must receive a "financial contribution on terms more favourable than those available to the recipient in the market".[1267]

7.169 In those cases where a financial contribution has been found to exist in the form of the foregoing of revenue otherwise due, the conclusion that a benefit exists has been made with little difficulty. For example, in *US – FSC,* the panel noted that the United States did not contest the issue of benefit. The panel stated:

[1267] Appellate Body Report, *Canada – Aircraft,* para. 158.

> "In our view, the financial contribution clearly confers a benefit, in as much as both FSCs and their parents need not pay certain taxes that would otherwise be due." [1268]

7.170 In the compliance proceedings in the same case, the panel used similar reasoning, finding that the recipient was "better off than it would have been absent the contribution, that is, if …it was therefore subject to otherwise applicable US taxation rules".[1269] The panel in *Canada – Autos* also found that the existence of a benefit readily follows once a determination has been made that revenue otherwise due has been foregone.[1270] In our view, the relevant tax break is essentially a gift from the government, or a waiver of obligations due, and it is clear that the market does not give such gifts.

7.171 For these reasons, the Panel finds that for those tax measures that it has found to constitute a financial contribution, a benefit is conferred.

7.172 The alleged pass-through of the benefit of the B&O tax reduction from LCA component manufacturers to Boeing is analysed in the section regarding the amount of the B&O taxation subsidy received by Boeing, commencing at paragraph 7.260 of this Report, for the reasons expressed at paragraph 7.214.

7.173 In relation to the European Communities' argument in the alternative, namely that the tax measures and the MSA give rise to a potential direct transfer of funds, the Panel notes that under Article 1.1(a)(1)(i), a "potential direct transfer of funds" is distinct from a "direct transfer of funds". Therefore, a potential direct transfer of funds must give rise to a benefit that is different from the benefit that arises as a result of a direct transfer of funds. In other words, the benefit must arise as a result of the potential direct transfer of funds *per se*, rather than due to any direct transfer of funds that may eventually occur.

7.174 This approach is in accordance with that taken by previous panels to have considered the issue, for example, the panels in *Brazil – Aircraft* and in *Canada – Aircraft Credits and Guarantees.*[1271] The panels drew support from the text of Article 14 of the SCM Agreement*,* which provides guidelines for the calculation of the benefit in the countervailing duty context. In particular, the panels noted that Article 14(c) provides:

> "A loan guarantee by a government shall not be considered as conferring a benefit, unless there is a difference between the amount that the firm receiving the guarantee pays on a loan guaranteed by the government and the amount that the firm would pay on a comparable commercial loan absent the government guarantee. In this case the benefit shall be the difference between these two amounts adjusted for any differences in fees."

7.175 The submissions of the parties in this dispute concerning Article 10.4.1 of the MSA focus almost exclusively on the meaning of "potential direct transfer of funds" under Article 1.1(a)(1)(i). The European Communities' only reference to benefit is in the context of arguing that the Article 10.4.1 "guarantee" should be considered a potential direct transfer of funds given that a loan guarantee is considered to be one. The European Communities argues:

> "{T}he object and purpose of the SCM Agreement is to impose multilateral disciplines on subsidies which distort international trade in goods, and one type of

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[1268] Panel Report, *US – FSC,* para. 7.103.
[1269] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.46.
[1270] Panel Report, *Canada – Autos*, para. 10.165.
[1271] Panel Report, *Brazil – Aircraft,* paras. 7.68-7.69; Appellate Body Report, *Brazil – Aircraft,* para. 157 and Panel Report, *Canada – Aircraft Credits and Guarantees,* paras. 7.344-7.345.

> trade distortionary impact of 'potential direct transfers of funds' is the transferal of risk to the government. This is evident, again, from the example of loan guarantees, where the risk of default on a loan is transferred from the creditor (i.e. third party) to the government, indirectly providing a benefit to the borrower (i.e. the subsidy recipient). In the present dispute, Article 10.4.1 of the Project Olympus MSA transfers the risk of default on the Public Parties' commitments from Boeing (i.e. the subsidy recipient) to the government, *directly providing a benefit* to Boeing." [1272]

7.176 The European Communities does not refer to benefit in the context of demonstrating that a benefit in the sense of Article 1.1(b) exists. However, as this is the only reference to benefit that the European Communities makes, we act on the assumption that this is its submission relating to Article 1.1(b).

7.177 In *Canada – Aircraft* the Appellate Body found that an analysis of benefit under Article 1.1(b) of the SCM Agreement requires consideration of whether the financial contribution in issue, by virtue of its terms, accords better treatment to the recipient than the treatment available in the market. According to the European Communities, the relevant benefit to Boeing arising from the potential direct transfer of funds is the transfer of the risk of default under the MSA from Boeing to the government. In a similar manner, the European Communities suggests that in the case of a *loan guarantee* the relevant benefit is the transfer of the risk of default from the creditor to the government.[1273] However, as indicated in Article 14(c) of the SCM Agreement, whether or not a government loan guarantee confers a benefit is determined by comparing the terms of the government guaranteed loan with a comparable commercial loan absent the government guarantee. Therefore, the European Communities' understanding of the benefit arising from a loan guarantee does not accord with the way in which the term benefit is used in the SCM Agreement. Similarly, in our view, even if the commitment under Article 10.4.1 of the MSA transfers the risk of default under the MSA from Boeing to the government, this does not convince us that a benefit under Article 1.1(b) exists in relation to the potential direct transfer of funds. The European Communities does not offer any submissions or evidence regarding the existence or the nature of an appropriate market benchmark against which to assess the terms of the financial contribution in issue. Merely demonstrating that the government has promised to provide either a direct transfer of funds or some other remedy should it default on its MSA commitments is not sufficient to prove that the promise *per se*, rather than the remedy that may eventually be provided, confers a benefit to Boeing. In these circumstances, we cannot conclude that a benefit has been conferred under Article 1.1(b) of the SCM Agreement.

7.178 For these reasons, the Panel finds that, even if the tax measures considered together with the MSA could be found to constitute a potential direct transfer of funds, the European Communities has not demonstrated that a benefit exists.

7.179 The Panel finds that the Washington B&O tax reduction, the B&O tax credits for preproduction development, for computer software and hardware and for property taxes and the sales and use tax exemptions for computer software, hardware and peripherals are subsidies to Boeing within the meaning of Article 1 of the SCM Agreement.

7.180 The Panel finds that the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption are not subsidies to Boeing.

[1272] European Communities' response to question 124, para. 89 (emphasis added).
[1273] European Communities' response to question 124, para. 89.

BCI deleted, as indicated **[***]**

(iv) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

Arguments of the European Communities

7.181 The European Communities argues that each of the tax measures under HB 2294 is *de jure* specific under Article 2.1(a) of the SCM Agreement or, in the alternative, is de facto specific under Article 2.1(c). Further, given its claim that the HB 2294 tax incentives are not only subsidies that cause adverse effects, but are also prohibited subsidies under Article 3 of the SCM Agreement, the European Communities contends that the subsidies are deemed specific under Article 2.3 of the SCM Agreement.[1274]

7.182 According to the European Communities, HB 2294 is the relevant legislation to consider under Article 2.1(a) of the SCM Agreement. HB 2294 explicitly limits the tax measures to an industry (the aerospace industry) or to a group of enterprises (enterprises engaged in producing and selling commercial aircraft or components for such aircraft).[1275] In relation to the leasehold excise tax exemption and the property tax exemption, the European Communities argues that exemptions are available only to manufacturers of "superefficient airplanes" and Boeing is the only such manufacturer within Washington State.[1276] To support its argument that HB 2294 is specific, the European Communities notes that the preamble to HB 2294 states that the act relates "to retaining and attracting the aerospace industry to Washington state".[1277] In addition, by entering the MSA with Boeing, the State of Washington has explicitly limited access to the tax breaks to Boeing.[1278]

7.183 The European Communities rejects the United States' argument suggesting that the fact that other manufacturing activities benefit from adjusted B&O tax rates or that other sectors receive B&O tax credits means that the tax reductions and credits to the aerospace industry cannot be specific. According to the European Communities, a proper analysis of whether the HB 2294 tax rate reductions and tax credits are specific excludes consideration of B&O tax rate reductions and credits to other sectors.[1279] This is because Article 2.1 of the SCM Agreement defines specificity by reference to "a subsidy". Therefore, the specificity analysis is exclusive to the subsidy in issue, namely HB 2294, and does not contemplate reference to other legislation or acts of the granting authority.[1280] The European Communities argues that the other tax rate reductions or credits may themselves constitute specific subsidies, but are not at issue in this dispute.[1281]

7.184 If the Panel considers that the tax measures under HB2294 are not *de jure* specific within the meaning of Article 2.1(a), the European Communities argues, in the alternative, that they are de facto specific to either an enterprise (Boeing), an industry (the aerospace industry) or a group of enterprises (enterprises engaged in producing and selling commercial airplanes or components), under Article 2.1(c) of the SCM Agreement.[1282] This is because "the fact of the matter" is that only manufacturers, retailers and wholesalers of commercial aircraft and commercial aircraft components, or in the case of the leasehold excise and property tax exemptions, only manufacturers of "superefficient airplanes", may take advantage of the tax incentives offered in HB 2294.[1283] Further,

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[1274] European Communities' first written submission, para. 144.
[1275] European Communities' first written submission, para. 139; European Communities, Exhibit EC-1286.
[1276] European Communities' second written submission, para. 85.
[1277] European Communities' first written submission, para. 139.
[1278] European Communities' first written submission, para. 142.
[1279] European Communities' response to question 34, para. 104.
[1280] European Communities' response to question 34, para. 104.
[1281] European Communities' second written submission, para. 73 and European Communities' comments on United States' response to question 233, para. 320.
[1282] Summary of the European Communities' Specificity Arguments, Exhibit EC-1286.
[1283] European Communities' second written submission, paras. 65, 74 and 85.

according to the European Communities, Boeing and component manufacturers in Washington will receive all of the B&O tax reductions and tax credits.[1284]

7.185 The European Communities also argues that the subsidies are de facto specific because HB 2294 was passed with Boeing in mind.[1285] The tax incentives were contingent upon establishing a commercial airplane final assembly facility, with the capacity to produce 36 "superefficient" airplanes per year, in Washington. The European Communities argues that the definition of a "superefficient airplane" in HB 2294 matches the specifications of the 787.[1286]

7.186 The European Communities submits that the fact that the State has guaranteed the tax measures specifically to Boeing through the MSA indicates that the reductions are de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.[1287]

Arguments of the United States

7.187 The United States accepts that the tax credit for computer software and hardware is specific "in that it applies only to manufacturers of commercial airplanes".[1288] Further, although its first written submission is not clear on this point[1289], in response to a Panel question the United States confirms that the sales and use tax exemption for computer equipment is a specific subsidy.[1290] In relation to the sales and use tax exemption for construction services and equipment, the leasehold tax exemption and the property tax exemption, the United States argues only that they are not financial contributions. It does not address the issue of specificity.

7.188 However, the United States argues that the Washington B&O tax reduction and the Washington B&O tax credits for preproduction development and for property taxes are neither *de jure* nor de facto specific.[1291] The United States rejects the European Communities' argument that the specificity analysis is limited to a consideration of the subsidy in issue. According to the United States, although the measure in issue is HB 2294, there is no basis in logic, in the text of the SCM Agreement or in past panel or Appellate Body reports to limit the evidence regarding specificity to the measure in issue.[1292]

7.189 The United States' position is that the specificity analysis should occur within the context of Washington's overall tax structure and in the light of its treatment of all categories of business activities.[1293] According to the United States, the B&O tax regime is a multi-rate system and the State has provided B&O tax reductions to a variety of business activities.[1294] Therefore, the reduction in the B&O rate for aerospace manufacturing is not specific within the meaning of the SCM Agreement.[1295] Further, in relation to the B&O tax credits, similar credits are provided to a variety of other business activities in the State. For example, B&O tax credits are provided to:

[1284] European Communities' second written submission, paras. 65 and 74.
[1285] European Communities' second written submission, para. 66.
[1286] European Communities' second written submission, para. 66.
[1287] European Communities' second written submission, para. 66.
[1288] United States' first written submission, para. 484, footnote 660; United States' response to question 13, para. 26.
[1289] See United States' first written submission, para. 500.
[1290] United States' response to question 13, para. 27.
[1291] United States' response to question 233, paras. 385 and 386.
[1292] United States' comments on European Communities' response to question 34, para. 116.
[1293] United States' first written submission, para. 482.
[1294] United States' first written submission, paras. 482-483; United States' second written submission, para. 140.
[1295] United States' first written submission, para. 483; United States' response to question 233, para. 385.

(a) qualifying businesses in rural areas that create new employment positions;

(b) aluminium smelters, which are eligible for B&O credits for property taxes;

(c) small businesses;

(d) businesses engaged in certain international service activities;

(e) high technology businesses engaged in research and development activities; and

(f) businesses that provide certain job training programmes.[1296]

Evaluation by the Panel

7.190 The primary argument of the European Communities regarding each of the tax measures under HB 2294 is that they are specific under Article 2.1(a) of the SCM Agreement. Article 2.1(a) focuses on whether the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy to "certain enterprises", as defined in the chapeau to Article 2. According to the ordinary meaning of the term "explicit", not just any limit on access to a subsidy will render it specific within the meaning of Article 2.1(a). Rather, the limitation must "distinctly express all that is meant; leaving nothing merely implied or suggested". The limitation must be "unambiguous" and "clear".[1297] In other sections of the SCM Agreement, such as Article 3, which refers to "in law or in fact" export contingency, panels and the Appellate Body have distinguished between *de jure* and de facto analyses by stating that a *de jure* analysis should be confined to the text of the relevant legislation or instrument in issue.[1298] Although Article 2.1(a) of the SCM Agreement does not specifically refer to "in law" or "*de jure*" specificity, we note that Article 2.1(c) refers to "in fact" specificity, perhaps as a means of distinguishing the analysis required under Article 2.1(c) from that required under Article 2.1(a). However, given that Article 2.1(a) provides that "where the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy", it is clear that the express limitation can be found either in the legislation by which the granting authority operates, or in other statements or means by which the granting authority expresses its will.

7.191 In considering the meaning of specificity, we recall that in *US – Upland Cotton* the panel stated that beyond setting out the rather general requirement that the granting authority or its legislation explicitly limit access to the subsidy to certain enterprises, "Article 2 of the SCM Agreement does not speak with precision about when 'specificity' may be found".[1299] The panel decision in *US – Upland Cotton* provides that the specificity analysis turns on the extent to which a subsidy is "sufficiently broadly available" throughout an economy. It suggests that there is some tipping point, which varies on a case-by-case basis, at which access to the subsidy in issue is no longer considered to be limited to "certain enterprises" but rather is "sufficiently broadly available" throughout an economy as to be non-specific.

7.192 Following the guidance from *US – Upland Cotton,* and in the light of the ordinary meaning of the term "explicit", a finding of specificity under Article 2.1(a) requires establishment of the existence

[1296] United States' first written submission, para. 495.

[1297] *Shorter Oxford English Dictionary,* L. Brown (ed.) (Clarendon Press, 1993), Vol. I, p. 888. This is confirmed by *Webster's New Encyclopedic Dictionary,* (Könemann, 1993), p. 353, which provides that "explicit" means "so clear in statement that there is no doubt about the meaning ... such verbal plainness and distinctness that there is no room for doubt or difficulty in understanding".

[1298] See e.g. Panel Report, *Canada – Autos,* para. 10.179 and Appellate Body Report, *Canada – Autos*, para. 167.

[1299] Panel Report, *US – Upland Cotton,* para. 7.1139.

of a limitation, on the face of the legislation or in other statements or means by which the granting authority expresses its will, that expressly and unambiguously restricts the availability of a subsidy to "certain enterprises" and as a result does not make the subsidy "sufficiently broadly available throughout an economy".

7.193 In considering the facts of this case, at the outset it is important to note that we are confronted with a situation where the parties to the dispute each have a different conceptual approach to the issue of specificity. In particular, the European Communities definitively asserts, in answer to a Panel question, that the specificity analysis must be restricted to consideration of HB 2294, the amending legislation through which the tax incentives to the aerospace sector were enacted.[1300] It rejects the United States' argument that B&O tax reductions and B&O tax credits in other sectors should be considered and that the specificity analysis should occur in the context of the entire B&O tax regime.[1301] In other words, the breadth of the specificity analysis, on the European Communities' case, is defined by the complaining party's definition of the measure through which a subsidy is enacted. In contrast, the United States argues that there is no basis in the SCM Agreement, or in past dispute settlement reports, to limit the evidence regarding specificity to the measure itself.[1302]

7.194 As a starting point for the analysis of *de jure* specificity, we consider it necessary to examine the terms of HB 2294. An inspection of HB 2294 lends credence to the European Communities' view that those tax measures under HB 2294 that we have found to be subsidies are specific. HB 2294 is entitled "Aerospace Industry – Tax Incentives", suggesting that any tax abatements provided through the legislation are limited to the aerospace industry.[1303] Further, section 1 of HB 2294, a general clause setting out the purpose of the legislation, provides that "… the people of the state have benefited from the presence of the aerospace industry in Washington state … it is in the public interest to encourage the continued presence of this industry through the provision of tax incentives".[1304] This provides further support for the notion that the tax measures were intended to be limited to the aerospace industry.

7.195 HB 2294 also explicitly limits each tax measure that we have found to be a subsidy to the aerospace industry or to certain enterprises within the aerospace industry. For example, sections 3 and 4 of HB 2294 are the relevant provisions that amend the *Revised Code of Washington* by introducing the B&O tax rate reduction at issue in these proceedings. Both sections set out the relevant provisions from the *Revised Code of Washington* in full and insert the amendments in underline, at sections 3(13) and 4(13). Sections 3(13) and 4(13) both commence:

> "Beginning October 1, 2005, upon every person engaging within this state in the business of manufacturing commercial airplanes, or components of such airplanes, as to such person the amount of tax with respect to such business shall…"[1305]

This is followed by the relevant B&O tax rate reductions. Further, the tax credit for computer software and hardware is enacted under section 8 of HB 2294. Section 8 explicitly provides that the tax credit it introduces is available only for computer programmes used for the "design and development of commercial airplanes" by a "manufacturer of commercial airplanes".[1306] Sections 7 and 15 expressly limit the preproduction development tax credit and the property tax credit to manufacturers of commercial airplanes or components for such airplanes. Finally, the terms of HB

[1300] European Communities' response to question 34, para. 104.
[1301] European Communities' response to question 34, para. 105.
[1302] United States' comments on European Communities' response to question 34, para. 116.
[1303] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1304] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1305] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.
[1306] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

2294 indicate that the sales and use tax exemption for computer hardware and software and peripherals applies to manufacturers or processors for hire of commercial airplanes or components for such airplanes.

7.196 Therefore, on the face of HB 2294, the taxation subsidies are expressly and unambiguously limited to enterprises manufacturing commercial airplanes or components for such airplanes. This is a limit to "certain enterprises" within the meaning of Article 2 of the SCM Agreement. Prior panels that have considered the meaning of "certain enterprises" in the chapeau to Article 2 have agreed that an "industry" may generally be referred to by the type of products it produces, which may include a broad range of end-products, rather than a specific type of product.[1307] For example, it may be possible to refer to a "steel industry", "textile industry" or a "telecommunications industry".[1308] Therefore, it is consistent with this line of reasoning to find that, on the face of HB 2294, the tax measures are limited to an "industry" within the meaning of Article 2, namely the aerospace industry. Similarly, it can be considered limited to a "group of enterprises", namely those enterprises that manufacture commercial airplanes or their components.

7.197 Therefore, a consideration of the amending legislation to the *Revised Code of Washington,* namely HB 2294, in isolation from the rest of the Washington tax system supports a finding that the taxation subsidies are *de jure* specific under Article 2.1(a) of the SCM Agreement. Access to the subsidies is expressly and unambiguously limited to an industry or to a group of enterprises. However, we do not think it is appropriate to stop the analysis at this point. There are a number of problems with the European Communities' approach of restricting the specificity analysis to the measure through which the subsidy is enacted, namely the amending legislation, rather than considering the taxation legislation as a whole pursuant to which the granting authority operates. In particular, the approach advocated by the European Communities may lead to anomalous results. For instance, if a granting authority were to introduce a broadly available subsidy through a single piece of legislation, on the European Communities' approach this subsidy would not be specific within the meaning of Article 2. However, if the granting authority were to introduce exactly the same broadly available subsidy, but were to extend it to each industry by passing separate pieces of legislation, this could result in a finding of specificity if the complainant defined the measure under challenge as only one of the pieces of legislation.

7.198 Therefore, we cannot accept the European Communities' submission that the specificity analysis must be limited to amending legislation through which the subsidy is enacted. As the United States points out in its submissions, the European Communities is perhaps conflating the "issue of an element of a claim (whether a measure is a subsidy) and the evidence (what needs to be shown to establish the claim)".[1309] By limiting the specificity analysis to the amending legislation, rather than considering the Washington taxation legislation as a whole, valuable information which may shed light on whether or not a subsidy is properly characterized as specific may be ignored. Further, the approach advocated by the European Communities means that the specificity analysis is dependent upon how the complaining party chooses to define the measure it is challenging.

7.199 In relation to the *B&O tax reduction* for aircraft manufacturing, although we have found it constitutes a subsidy, it is possible that it is one part of a wider subsidy extended to other industries through separate amendments to the Washington tax code. In our view, it is necessary to examine the B&O taxation system as a whole, in particular the legislation and documents produced by the granting authority, in order to determine whether the subsidy in issue is explicitly limited to certain enterprises or is broadly available. Therefore, we judge it appropriate to consider the *Revised Code of Washington* as a whole, rather than merely the amending legislation, HB 2294, in analyzing whether

[1307] Panel Report, *US – Softwood Lumber IV,* paras. 7.120 – 7.121.
[1308] Panel Report, *US – Softwood Lumber IV,* paras. 7.120 – 7.121.
[1309] United States' comments on European Communities' response to question 34, para. 116.

the B&O tax rate reduction is specific within the meaning of Article 2.1(a). In doing so, we note that although the European Communities categorically states in response to question 34 that only the HB 2294 B&O tax reduction should be considered in the specificity analysis, the European Communities moderates this argument to some extent by making submissions regarding other differential tax rates, namely by suggesting that perhaps the differential tax rates that apply to other sectors are also individually specific subsidies.

7.200 The essence of the United States' argument regarding *de jure* specificity is that, when considered in the broader context of the Washington B&O taxation regime, it is evident that the tax reduction implemented through HB 2294 is not a specific subsidy. This is because the B&O taxation regime taxes different business activities at different rates and aerospace manufacturing is merely one among numerous business activities that has an individual rate of taxation.[1310] These rates may be periodically adjusted and there is no generally applicable taxation rate.[1311] Although not made explicit in relation to its *de jure* specificity submissions, the United States' argument seems to be the same as that in relation to its de facto specificity arguments, namely that the State of Washington has provided similar reductions to a variety of other business activities and therefore, if the reduction to the aerospace industry is a subsidy, it is not specific.

7.201 It is possible that the B&O tax reduction to the aerospace industry is one part of a wider subsidy to a variety of industries, such that the subsidy is "sufficiently broadly available" throughout the Washington economy as to render it non-specific. However, beyond a one paragraph submission regarding *de jure* specificity, the United States has provided little information on which the Panel would be able to draw the conclusion the United States seeks.[1312]

7.202 It is evident from the text of the *Revised Code of Washington* that there is some variation in the B&O taxation rates that apply in the manufacturing, retailing and wholesaling sectors in Washington. We recall our previous conclusion that there is a general B&O tax rate for manufacturing activities. However, there are certain exceptions to this rate. In particular, aside from aircraft manufacturers, the following manufacturing activities are subject to a differential rate of taxation:[1313]

(a) Manufacturing wheat into flour, barley into pearl barley, soybeans into soybean oil, canola into canola oil or sunflower seeds into sunflower oil, raw seafood, biodiesel/alcohol fuel, processing or splitting dried peas and processing perishable meat products (0.138 per cent);

(b) Manufacturing semi-conductor materials and nuclear fuel assemblies (0.275 per cent);

(c) Manufacturing aluminium and solar energy systems (0.2904 per cent);

(d) Manufacturing associated with fresh fruit, vegetables and dairy products (exempt);[1314]

(e) Manufacturing of timber and timber products (0.4235 per cent until 30 June 2007 and 0.2904 per cent until 30 June 2024).

[1310] United States' first written submission, paras. 482-483.
[1311] United States' comments on European Communities' response to question 34, para. 117.
[1312] See United States' response to question 233, para. 385.
[1313] See RCW 82.04.260, Exhibit US-181, HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit US-54 s3; Business and Occupation Tax, RCW 82.04, Exhibit US-179, RCW 82.04.294, Exhibit US-188, RCW 82.04.2909, Exhibit US-189.
[1314] See United States' first written submission, para. 431, footnote 588.

7.203 Similarly, we recall our conclusion that there is a general tax rate of 0.484 per cent for wholesaling activities and 0.471 per cent for retailing. These general rates are also subject to certain exceptions. Aside from wholesaling and retailing of commercial aircraft, a differential taxation rate applies to: [1315]

(a) Wholesaling and reselling prescription drugs, wholesaling of perishable meat products (0.138 per cent);

(b) Wholesaling of solar energy systems and of aluminium, where manufactured by the seller (0.2904 per cent);

(c) Wholesaling or retailing of nuclear fuel assemblies, where manufactured by the seller (0.275 per cent);

(d) Retailing of interstate transport equipment (0.484 per cent);

(e) Wholesaling of dairy products, fresh fruit and vegetables, where manufactured by the seller and where the purchaser transports the goods out of the state (exempt). [1316]

7.204 This information gives credence to the United States' argument that the aerospace industry is not alone in receiving an exception to the general rates of taxation for manufacturing, retailing and wholesaling activities. However, the United States' submissions regarding why this should lead to a finding of non-specificity under Article 2.1(a) are rather vague. In particular, as pointed out by the European Communities, it is not clear why any preferential B&O taxation rates afforded to other industries should not be considered separate specific subsidies to the industries concerned. We have found that through the introduction of HB 2294 the State of Washington granted a subsidy and that on the face of HB 2294 the subsidy is limited to the aerospace industry. Viewing the *Revised Code of Washington* as a whole, it is clear that at various times, differential rates, also explicitly limited to certain enterprises, have been introduced. The United States' submissions seem to suggest that the reduced rate of taxation that applies to airplane manufacturers is in fact part of a wider subsidy, that has been granted to a range of other industries, that is "sufficiently broadly available" throughout the Washington economy as to be non-specific.

7.205 If the differential B&O tax rates were truly implemented as part of a common subsidy programme, it would be reasonable to expect some links between the individual tax reductions, for example, in the timing of their introduction, in their purpose or in their levels.[1317] However, beyond an assertion that the tax reductions were implemented to combat the inequities that arise due to "pyramiding", the United States has not provided the Panel with any evidence to suggest that the reductions to separate industries are part of a wider, generally available and explicit programme of tax reductions. In fact, some of the evidence submitted by the United States runs counter to this argument. For example, Exhibit US-191 reveals that the differential tax rates were introduced at a range of different times and for a variety of different purposes. Further, although a number of exhibits submitted by the United States include statements that "pyramiding" is a problem associated with the B&O tax[1318], the exhibits do not indicate that any tax reductions have been introduced in order to

[1315] See RCW 82.04.260, Exhibit US-181, HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit-US-54, s3; Business and Occupation Tax, RCW 82.04, Exhibit US-179, RCW 82.04.294, Exhibit US-188, RCW 82.04.2909, Exhibit US-189.

[1316] See United States' first written submission, para. 431, footnote 588.

[1317] In fact, USDOC considers similar factors in determining if two or more separate subsidy programmes are "integrally linked" and can therefore be treated as one for specificity purposes (see G/SCM/N/1/USA/1/Suppl.4, 29 March 1999, §351.502 (c)).

[1318] See e.g. Business and Occupation Tax, RCW 82.04, Exhibit US-179 and Washington State Tax Structure Study 2002, Volume 1, Exhibit US-180.

combat this problem, as asserted by the United States. For these reasons, the Panel finds that the B&O tax reduction granted to the aerospace industry under HB 2294 is a subsidy that is specific within the meaning of Article 2.1(a) of the SCM Agreement.

7.206 In relation to the *B&O tax credits for preproduction development and for property taxes,* in taking a broader view of the Washington B&O taxation system, we note that the United States argues that the subsidies are not specific because "the State of Washington has provided *similar* credits to a variety of other business activities within the State".[1319] The United States provides a brief list of such tax credits. Its description of these credits is minimal, although some are supported by exhibits.[1320]

7.207 The submissions of the United States regarding why the grant of B&O tax credits to other industries supports a conclusion that the two aerospace credits in question are non-specific are quite vague. In particular, it is not clear why the United States concedes that the tax credit for computer software and hardware is specific and does not make the same concession in relation to the tax credits for preproduction development and for property taxes. Presumably, it is because the tax credit for computer software and hardware was not considered "similar" enough to the credits provided to other sectors. Yet, the similarities between the remaining two tax credits under HB 2294 and the credits to other sectors of the economy are not highlighted by the United States and are not clear from the information provided in relation to them.

7.208 None of the tax credits provided to other sectors are directly related to preproduction development. For example, the B&O tax credit for businesses in rural areas that create new employment positions does not require that the employment positions be created in the area of preproduction development.[1321] There is one tax credit cited by the United States, provided to aluminium smelters, that credits property taxes paid.[1322] However, no detailed information is provided regarding the degree of similarity between the terms of this property tax credit and the property tax credit granted to the aerospace industry.

7.209 In any event, the United States does not clearly articulate why any similarity between the tax credits provided to other sectors and those provided under sections 7 and 15 of HB 2294 is central to the specificity analysis. The argument seems to be along the same lines as its submissions on the B&O tax rate reduction, namely that the preproduction and property tax credits are part of a wider, broadly available subsidy. The United States does not explain why the various tax credits, including the two to the aerospace industry, are part of the same subsidy programme, rather than each tax credit being a separate, specific subsidy.

7.210 In principle, it is possible that while HB 2294 is explicitly limited to the aerospace sector, this is merely one measure through which a more generally available subsidy is implemented. However, the United States' submissions and evidence are not sufficient for us to reach such a conclusion. For these reasons, the Panel finds that the B&O tax credit for preproduction development and the B&O tax credit for property taxes are specific subsidies within the meaning of Article 2.1(a) of the SCM Agreement.

7.211 In relation to those taxation subsidies for which the United States does not contest specificity, namely the *tax credit for computer software and hardware,* and the *sales and use tax exemption for computer hardware, software and peripherals,* we recall that a consideration of HB 2294 in isolation

[1319] United States' first written submission, para. 495 (emphasis added).

[1320] See United States' first written submission, para. 495; United States' response to question 233, para. 386 and Rural Area Business and Occupation Tax Credit for New Employees, Exhibit US-196 and B&O Tax Credits Website, Exhibit US-197.

[1321] See Rural Area Business and Occupation Tax Credit for New Employees, Exhibit US-196.

[1322] United States' first written submission, para. 495 and Exhibit US-197, p. 2.

from the rest of the Washington tax system supports a finding that the taxation subsidies are *de jure* specific under Article 2.1(a) of the SCM Agreement. Taking a broader view of the taxation system as a whole, rather than restricting the specificity analysis to the terms of HB 2294, does not indicate that the subsidies are non-specific. Neither party makes any submissions or directs the Panel to any evidence to support a deviation by the Panel from the conclusion that the subsidies are *de jure* specific. For these reasons, the Panel finds that the B&O tax credit for computer software and hardware and the sales and use tax exemption for computer hardware, software and peripherals are specific subsidies within the meaning of Article 2.1(a) of the SCM Agreement.

7.212 In conclusion, the Panel finds that the B&O tax reduction, the three B&O tax credits and the sales and use tax exemption for computer software, hardware and peripherals are specific under Article 2.1(a) of the SCM Agreement. In the light of this conclusion, it is not necessary for the Panel to address the European Communities' argument in the alternative, namely that each of the tax measures is specific under Article 2.1(c) of the SCM Agreement. Further, given that we have concluded that there is no financial contribution to Boeing in relation to the sales and use tax exemption for construction services and equipment, the leasehold excise tax exemption and the property tax exemption, there is no need for the Panel to address the European Communities' arguments on specificity in relation to these measures.

(v) The amount of the subsidy to Boeing's LCA division

7.213 The European Communities includes its arguments regarding the amount of the subsidies within its submissions regarding the existence of the subsidies, in particular as a part of its financial contribution submissions. In the view of the Panel it is not necessary to calculate the amount of a subsidy under Article 1 of the SCM Agreement. However, for ease of reference we include our reasoning and conclusions on the amounts of the subsidies following the Article 1 analysis for each subsidy. This maintains the structure of arguments chosen by the parties. However, in our view, the findings on amount are properly characterized as one part of the serious prejudice analysis.

7.214 In relation to three of the subsidies in issue, namely the Washington B&O tax reduction and the two measures challenged in the State of Kansas, the European Communities makes claims of "pass-through". In the Panel's view, as explained at paragraphs 7.281-7.288 of this Report, any need to demonstrate "pass-through" arises under Articles 5 and 6 of the SCM Agreement. In particular, a pass-through analysis is conducted in order to identify the subsidized product in issue under Article 6 of the SCM Agreement. The pass-through analysis has close links to the calculation of the amount of each subsidy, the purpose of which is to demonstrate the extent to which the subsidized product benefits from the subsidy. Consequently, we include our findings on pass-through in the sections of the Report quantifying the amounts of the subsidies, although we view both pass-through and amount to be issues of relevance to the serious prejudice analysis.

Arguments of the European Communities

Amounts received directly by Boeing's LCA division

7.215 In estimating the amounts of the tax measures under HB 2294, the European Communities calculates amounts in the period 2006-2024. In doing so, the European Communities relies upon estimates derived from a Washington State September 2003 presentation.[1323] The European Communities' estimates in this regard are set out in Exhibit EC-27. In relation to some of the subsidies, the European Communities accepts that a spreadsheet prepared by the Washington Department of Revenue (entitled "Final HB 2294 Fiscal Note – 20 Year Spreadsheet") and submitted

[1323] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65.

by the United States as Exhibit US-184, is a more up-to-date source of information. In relying on the estimates in the Washington Department of Revenue spreadsheet, the European Communities notes that the spreadsheet does not distinguish between the amount of each subsidy to Boeing and the amount to other enterprises within the aircraft industry. Therefore, the European Communities uses the estimates of the proportion of the benefit that accrues to Boeing in relation to each tax measure, which are found in the Washington State September 2003 presentation.

7.216 In relation to the *Washington State B&O tax reduction,* the European Communities concedes that, rather than attributing a dollar value to the B&O tax reduction, the Panel could assess it on an *ad valorem* basis, reflecting the statutory reduction in the applicable tax rates.[1324] However, in making this concession, the European Communities notes that certain complications arise in expressing the Washington B&O tax reduction in this way.[1325] This is because of the European Communities' allegation that the B&O tax reduction to component manufacturers passes-through to Boeing. The European Communities notes that the precise value of the components used in each aircraft is not known and therefore it is difficult to convert the benefit of the B&O tax reduction that passes-through to Boeing into an *ad valorem* rate.[1326] The European Communities submits that whether the B&O tax subsidies are assessed on the basis of annual projected amounts provided by the granting authorities or an *ad valorem* basis, the resulting per-aircraft subsidization figures remain the same.[1327] The European Communities quantifies the dollar value of the benefit to Boeing arising from the Washington B&O tax reduction as $2.12 billion over the period 2006-2024.[1328] This estimate is derived from the Washington September 2003 presentation.

7.217 The European Communities originally derived its estimates for the three *B&O tax credits* from the Washington State September 2003 presentation and set out those estimates in Exhibit EC-27. However, after submission by the United States of the spreadsheet prepared by the Washington State Department of Revenue, the European Communities' revised its estimates.[1329] It relied upon the Department of Revenue spreadsheet and the estimates in the Washington State September 2003 presentation that Boeing receives 65 per cent of the B&O tax credit for preproduction development and 100 per cent of the tax credit for computer software and hardware. In relation to the tax credit for property taxes, the European Communities attributed the full value of the estimate in the Department of Revenue Spreadsheet to Boeing because the spreadsheet indicates that the amount relates to "new construction related to the 7E7 plane" at Boeing's Everett facility.[1330] Using this methodology, the European Communities' position is that, over the period 2004-2023, Boeing received $101.3 million in B&O tax credits for preproduction development, $20.4 million in B&O tax credits for computer software and hardware and $15.1 million in B&O tax credits for property taxes.[1331]

7.218 The European Communities submits that the benefit to Boeing's LCA division of the *sales and use tax exemption for computer hardware, peripherals and software* over the period 2004-2024 is $120.3 million.[1332] The European Communities bases this estimate on the Washington State September 2003 presentation, which estimates the amount of the tax exemption to Boeing by assuming that Boeing will receive 80 per cent of the amount of the tax exemption that is provided to

[1324] European Communities' response to question 229, para. 427.
[1325] European Communities' response to question 229, para. 430.
[1326] European Communities' response to question 229, para. 430.
[1327] European Communities' response to question 229, para. 434. In response to this question, the European Communities recalculates the per-aircraft subsidization rates based upon *ad valorem* subsidization rates that it attributes to the Washington B&O tax reduction and to the City of Everett B&O tax reduction.
[1328] European Communities' first written submission, para. 131.
[1329] European Communities' second written submission, para. 68 and footnotes 102 and 103.
[1330] European Communities' second written submission, para. 68 and footnotes 102 and 103.
[1331] European Communities' second written submission, para. 68 and footnotes 102 and 103.
[1332] European Communities' second written submission, para. 76.

the industry as a whole.[1333] The European Communities argues that this estimate is consistent with that in the spreadsheet prepared by the Washington State Department of Revenue.[1334] The European Communities argues that insofar as the United States suggests that it is over-counting the benefit of the tax exemptions to Boeing's LCA division, it has already reduced the estimates in the Washington State September 2003 presentation to take into account tax exemptions going to suppliers.[1335] The United States' argument that the figures should be further reduced because of use of the tax exemptions by other companies is "entirely unsupported".[1336]

7.219 In relation to the *sales and use tax exemption for construction and equipment,* the European Communities estimates that the benefit to Boeing's LCA division over the period 2004-2005 is $9.6 million and that beyond this period the amount received by Boeing is zero. The European Communities draws these figures from the Washington State September 2003 presentation. The European Communities' response to the argument of the United States that Boeing has not and will not use this subsidy are outlined in the section on existence of a financial contribution commencing at paragraph 7.76 of this Report.

7.220 The European Communities' quantification of the *Washington leasehold excise tax exemption* and the *property tax exemption* can be found in Exhibit EC-27 and is based on the Washington State September 2003 presentation.[1337] In this exhibit, the European Communities submits that the benefit to Boeing of the leasehold excise tax exemption is $0.6 million from 2004-2024, while the benefit to Boeing of the property tax exemption over the same period is $45.5 million. In response to the United States' argument that Boeing has not and will not use these tax exemptions, the European Communities relies upon the same submissions as outlined in the section on the existence of a financial contribution, commencing at paragraph 7.76 of this Report.

Amount of the benefit claimed to "pass-through" to Boeing

7.221 In addition to arguing that Boeing directly receives the benefit of the Washington State B&O tax reduction, the European Communities also contends that the benefit of the Washington B&O tax reductions to manufacturers of components for commercial airplanes "passes-through" to Boeing.[1338] In particular, the European Communities contends that of the $1.15 billion in B&O tax reductions to component manufacturers, $1.05 billion passes-through to Boeing. The European Communities does not argue that the full amount of the tax reduction to Boeing's suppliers passes-through to Boeing because it attempts to exclude benefits to manufacturers that supply both Boeing and Airbus.[1339]

7.222 The European Communities states that in order for it to make a successful claim under Articles 5 and 6 of the SCM Agreement, it must demonstrate that the benefit associated with the tax reduction provided to component manufacturers "passes-through" to Boeing.[1340] The European Communities reasons that a claim under Articles 5 or 6 of the SCM Agreement requires a causation analysis, namely a demonstration that the subsidy is responsible for the adverse effects claimed. To perform this analysis, a prerequisite is that the alleged subsidy does in fact benefit the product that the complaining Member identifies as subsidized.[1341] Therefore, it is necessary for the

[1333] European Communities' second written submission, para. 76, footnote 119.
[1334] European Communities' second written submission, para. 76, footnote 119.
[1335] European Communities' second written submission, para. 78.
[1336] European Communities' second written submission, para. 78.
[1337] See footnote to the spreadsheet at State and Local Subsidies to Boeing LCA Division, Exhibit EC-27.
[1338] European Communities' first written submission, paras. 133 and 135.
[1339] European Communities' response to question 234, para. 437.
[1340] European Communities' response to question 137, paras. 147 and 152.
[1341] European Communities' response to question 137, para. 148.

European Communities to prove that the tax reduction to component manufacturers benefits the downstream product, Boeing LCA.[1342]

7.223 In support of this position, the European Communities refers to the Appellate Body's decision in *US – Upland Cotton,* which it interprets as holding that although a pass-through analysis is not critical for the purposes of quantifying a subsidy under Article 6, it is always necessary to conduct a pass-through analysis under Articles 5 and 6 to demonstrate that the measures in question do in fact subsidize the product in issue and not some other product.[1343] The European Communities also cites the Appellate Body's decision in *US – Softwood Lumber IV* as authority for the notion that in order to satisfy the definition of a subsidy under Article 1 of the SCM Agreement, it must be established that benefits to an upstream producer pass-through to the downstream product alleged to be subsidized.[1344] Although not entirely clear, it does not seem that the latter argument based on *US – Softwood Lumber IV* constitutes a distinct basis for the requirement to establish pass-through. Rather, the European Communities appears to argue that as part of the causation analysis it is necessary to demonstrate that the product allegedly causing the adverse effects is in fact subsidized. To do this, the essential elements of the subsidy definition in Article 1 must be present in respect of the products claimed to be causing the serious prejudice.[1345]

7.224 The European Communities submits that it has proven that component manufacturers pass-through to Boeing the benefit of the B&O tax reduction in the form of lower input prices. Its case is based on the best information available, in view of the refusal by the United States to provide the supply contracts between Boeing and its Washington-based suppliers.[1346] To demonstrate pass-through, the European Communities submits an economic model prepared by Assistant Professor John Asker and supplemented by a report by Professor Wachtel.[1347] In response to the reports of the United States' economists and to the questions of the Panel, Professor Asker submits three additional papers.[1348]

7.225 Based on his model, Professor Asker reaches the conclusion that an *ad valorem* subsidy paid to an input supplier passes-through to the downstream producer at the rate of at least 100 per cent. In creating the model, Professor Asker makes a number of assumptions, including that the downstream firm is a monopsonist, although the model also accommodates an oligopolistic structure. The suppliers to the downstream firm also have some limited market power arising from an information asymmetry about their fixed costs of production ("an information rent"). The suppliers have the same marginal cost and each receive the same *ad valorem* subsidy. The downstream purchaser of inputs invites suppliers to compete for supply contracts in a competitive tendering process and chooses the

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[1342] European Communities' response to question 137.

[1343] European Communities' response to question 137, para. 149. Appellate Body Report, *US – Upland Cotton*, para. 472.

[1344] European Communities' response to question 137, para. 151. Appellate Body Report, *US – Softwood Lumber IV*, para. 143.

[1345] European Communities' response to question 137, para. 151.

[1346] European Communities' second written submission, para. 58 and European Communities' comments on United States' response to question 231, para. 305.

[1347] Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, including Dr. John Asker, On the Pass-Through of Ad Valorem Subsidies Received by Input Suppliers, 1 November 2006, Exhibit EC-16. The exhibit indicates that Wachtel is a Professor of Economics at New York University, Leonard N. Stern School of Business and that Asker is Assistant Professor of Economics at New York University, Leonard N. Stern School of Business.

[1348] Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437 and Dr. John Asker, Comments on US Response to Panel Question 393(a), and on Related Aspects of Exhibit US-1363, 14 August 2009, Exhibit EC-1447.

supplier that quotes the lowest price. The level of pass-through decreases as the number of input suppliers increase. However, the model always predicts that the minimum level of pass-through is 100 per cent.[1349]

7.226 Professor Wachtel's report provides some evidence that the market for the supply of LCA components fits the assumptions of the model. For instance, Professor Wachtel provides a quote from Thomas Friedman indicating that Boeing purchases "off-the-shelf commodity parts" by a process of competitive tender.[1350]

7.227 In response to the criticism of the United States' economists that the assumptions underlying the economic model do not reflect the reality of the market for LCA components, Professor Asker responds that some of the points raised by the United States' economists are not well-founded and that his framework can easily accommodate their other points.[1351] Professor Asker concludes that "none of the critiques…are problematic, for either the framework itself, or for its application to the commercial airplane business".[1352] However, in his response, Professor Asker acknowledges that in at least one circumstance, namely when only a subset of suppliers is eligible for the subsidy, he cannot rule out less than 100 per cent pass-through.[1353]

7.228 In response to a Panel question, Professor Asker indicates that, in the absence of empirical data, it is not possible to narrow down the range of pass-through to anything other than "somewhat greater than 100%". He notes that in empirical studies of other industries, "pass-through of greater than 100% is common".[1354]

7.229 The European Communities contends that the United States' criticism of its pass-though model hinges on the point that Boeing is not the sole buyer of outputs produced by its suppliers.[1355] The European Communities' economist concludes that this makes a difference to his economic model only under very limited circumstances and the United States has failed to demonstrate that these circumstances exist.[1356]

7.230 In response to a Panel question regarding a market structure in which each supplier acts as a monopolist, the European Communities rejects any suggestion that this market structure is appropriate in the context of the LCA supplier market.[1357] The European Communities submits a statement from

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[1349] See Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, including Dr. John Asker, On the Pass-Through of Ad Valorem Subsidies Received by Input Suppliers, 1 November 2006, Exhibit EC-16 for a description of the assumptions on which the model is based.

[1350] Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, including Dr. John Asker, On the Pass-Through of Ad Valorem Subsidies Received by Input Suppliers, 1 November 2006, Exhibit EC-16, p. 3. In relation to this point, the European Communities also refers to a statement from the Boeing website that "our company emphasizes the importance of competitive bidding as a good business practice" (Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437).

[1351] Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, p. 2.

[1352] European Communities' second written submission, para. 59.

[1353] See also, Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 16.

[1354] Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, pp. 20-21.

[1355] European Communities' second written submission, para. 60.

[1356] European Communities' second written submission, para. 60.

[1357] European Communities' response to question 393, para. 547.

an Airbus procurement specialist which indicates that the existence of only one supplier willing and able to supply a given component in the LCA market is "extremely unusual".[1358]

7.231 In addition to the economic model, the European Communities also refers to a number of statements made by Governor Locke of Washington, which it argues acknowledge pass-through of B&O tax rate reductions from component producers to Boeing.[1359] For instance, Governor Locke stated "if we can reduce the tax burden on the suppliers, those benefits will be passed on to Boeing".[1360]

7.232 Throughout its submissions, the European Communities repeatedly refers to the failure by the United States to provide it with the contracts between Boeing and its suppliers. Further, it is hypocritical for the United States to argue that it is impossible accurately to assess pass-through without empirical data, when such data is solely in the possession of the United States.[1361] The United States could have provided this information to the European Communities or to its own experts to allow such an empirical analysis to be conducted.[1362]

Arguments of the United States

Amounts received directly by Boeing's LCA division

7.233 In relation to each of the taxation measures in issue under HB 2294, the United States' position is that only revenue that has actually been foregone in the past may be included in the quantification.[1363]

7.234 With respect to the *Washington B&O tax reduction,* the United States argues that it is not in fact necessary to attribute a dollar value to the amount of the tax reduction to Boeing. The tax reduction is calculated on an *ad valorem* basis and therefore, any subsidization rate remains constant regardless of the absolute levels of Boeing's sales volume and prices.[1364] In response to the European Communities' calculation of a dollar value for the subsidy, the United States originally relies upon the spreadsheet prepared by the Washington State Department of Revenue to argue that the *total* revenue foregone due to the B&O tax reduction was $54.4 million between 1 October 2005 and the end of the 2007 financial year.[1365] In response to a Panel question, given that the spreadsheet prepared by the State Department of Revenue does not isolate the amount of the tax reduction to be received by Boeing, but rather provides a figure that estimates the benefit to the industry as a whole, the United States submits that the Panel should rely upon the Washington State September 2003 presentation.[1366]

7.235 The United States' argues that the European Communities overstates the amount of the financial contribution *to Boeing* arising from the *Washington B&O tax credits.* This is because the European Communities' estimates include tax credits provided to other entities.[1367] Despite taking this position, the United States indicates that it "accepts the EC's use of Washington State's estimate that

[1358] European Communities' response to question 393, para. 547 and Declaration of Philippe Alary-Tossaint regarding competition among Airbus suppliers, 22 July 2009, Exhibit EC-1438.
[1359] See e.g. European Communities' first written submission paras. 96, 135 and European Communities' second written submission, para. 57.
[1360] European Communities' non-confidential oral statement at the second meeting with the Panel, para. 20. See also, European Communities' second written submission, para. 57.
[1361] European Communities' comments on United States' response to question 393, para. 455.
[1362] European Communities' comments on United States' response to question 393, para. 455.
[1363] See e.g. United States' first written submission, para. 466.
[1364] United States' response to question 229, para. 374.
[1365] United States' first written submission, para. 466.
[1366] United States' response to question 228, para. 371.
[1367] United States' response to question 235, para. 392.

65 per cent of the value of the B&O tax credit for preproduction development is provided to Boeing…Similarly, the United States accepts the estimate from Washington State that 100 per cent of the value of the B&O tax credit for computer software and hardware is provided to Boeing. Finally, the United States accepts the EC's estimate that 100 per cent of the B&O tax credits for property taxes is provided to Boeing".[1368] Similarly, in response to a Panel question, the United States categorically affirms that it "accepts the EC's estimate of the amount of B&O tax credits for preproduction development, property taxes, and computer software and hardware that were taken by Boeing".[1369]

7.236 The United States relies on the estimates found in the Washington State Department of Revenue spreadsheet in quantifying the amount of the *sales and use tax exemption for computer hardware, peripherals and software.*[1370] This leads to an estimate of $11.5 million for the total amount of revenue foregone in relation to this tax exemption.[1371] However, only a portion of this represents the benefit received by Boeing because other manufacturers of airplanes and airplane components have also received the tax exemption.[1372] The United States is prepared to accept the European Communities' estimate that 80 per cent of the total amount of the exemption is received by Boeing.[1373]

7.237 The United States' position is that the *sales and use tax exemption for construction and equipment,* the *leasehold excise tax exemption* and the *property tax exemption* have not and will not be used by Boeing. Therefore, any quantification of the amount of these tax incentives to Boeing should be zero.[1374] The evidence and arguments that the United States relies upon in support of its position that the subsidies have not and will not be used by Boeing are outlined in the section on the existence of a financial contribution, commencing at paragraph 7.100 of this Report.

Amount of the benefit claimed to "pass-through" to Boeing

7.238 In relation to the European Communities' pass-through case, the United States' position on the relevance of a pass-through analysis in the context of a claim under Articles 5 and 6 is in general agreement with that of the European Communities.[1375] However, at various stages of its submissions, the United States seems to assert differing bases in the SCM Agreement for a requirement to conduct a pass-through analysis in the context of a serious prejudice case.

7.239 In its first written submission, the United States argues that pass-through must be demonstrated in this case in order to prove the existence of the subsidy:

> "{I}f the recipient of a subsidy is different from and unrelated to the producer of the allegedly subsidized product, a subsidy exists only if the benefit is passed through to the producer." [1376]

7.240 The United States relies on *US – Softwood Lumber IV* as support for this proposition. It acknowledges that although the case was a decision regarding Part V of the SCM Agreement, the decision applies equally to a claim under Part III because the Appellate Body "grounded its conclusion exclusively in Article 1, which is equally applicable to an actionable subsidy claim".[1377]

[1368] United States' response to question 235, para. 392.
[1369] United States' response to question 236, para. 393.
[1370] United States' first written submission, para. 499.
[1371] United States' first written submission, para. 499.
[1372] United States' first written submission, para. 499.
[1373] United States' response to questions 237 and 238, paras. 394 and 395.
[1374] United States' responses to question 239.
[1375] United States' comments on European Communities' response to question 137, para. 127.
[1376] United States' first written submission, para. 54.
[1377] United States' first written submission, para. 55.

Therefore, in its first written submission, the United States appears to suggest that the requirement to demonstrate pass-through in a serious prejudice claim is found exclusively in Article 1 of the SCM Agreement. [1378]

7.241 In its response to question 137, the United States argues that pass-through is required on a different basis to that asserted in its first written submission. It argues that when the recipient of a subsidy is a third party unrelated to the producer of the allegedly subsidized product, it is necessary to demonstrate pass-through in order to show that the subsidy confers a benefit on the allegedly subsidized product and leads to the adverse effects claimed.[1379] In this regard, the United States refers to the use of the terms "like product" and "subsidized product" in Article 6.3 of the SCM Agreement as supporting the requirement for a pass-through analysis.[1380]

7.242 The United States contends that the European Communities has not proven pass-through of the benefit of the subsidies. According to the United States, the reports prepared by Professors Wachtel and Asker and relied upon by the European Communities are entirely theoretical and are based upon assumptions that do not reflect the realities of the aerospace manufacturing market. Further, the models are not supported by empirical testing.[1381] The United States argues that if the conclusion of the European Communities' reports were accurate, namely that *ad valorem* subsidies to upstream suppliers pass-through to downstream producers at the rate of at least 100 per cent, there would never be any need to prove pass-through of a subsidy between suppliers and manufacturers, at least for *ad valorem* subsidies.[1382]

7.243 The United States relies on reports by its own experts, Drs Dorman, Terris, Smith and Brown, to discredit the reports by Professors Wachtel and Asker.[1383] Dr Dorman criticizes the European Communities' model as "entirely theoretical" and containing no reference to Boeing, the large commercial airplane business, the aerospace industry generally or any real-world supplier relationships.[1384] According to Dr Dorman, the assumptions underlying the model "differ dramatically from the reality of aerospace procurement".[1385] For example, Dr. Dorman criticizes the assumptions that Boeing is a monopsonist with respect to every input it purchases, that price is the sole consideration in Boeing's choice of supplier, that input suppliers have an equal and constant marginal cost of production, that the only source of market power for suppliers is asymmetric information and that all bidders receive the same subsidy.[1386] According to Dr. Dorman, these assumptions do not reflect the realities of the market for the supply of LCA components. As a result

[1378] United States' first written submission, para. 55.
[1379] United States' response to question 137, para. 105 and United States' comments on European Communities' response to question 137, para. 127.
[1380] United States' response to question 137, footnote 111.
[1381] United States' first written submission, paras. 469-481.
[1382] United States' comments on European Communities' response to question 234, para. 422.
[1383] See Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, by Drs. Stephen D. Smith, PhD., and Louie Brown, Exhibit US-185; Reply to the Reports of Professors Wachtel and Asker, by Gary J. Dorman Exhibit US-186 and Gary J. Dorman and Kristin L. Terris, Economic Models and Subsidy Pass-Through, July 30, 2009, Exhibit US-1363. The exhibits reveal that Drs. Smith and Brown are economists employed full-time by the State of Washington Department of Revenue to provide "objective, scholarly analysis of the economic effects of proposed and enacted tax legislation". They received no additional compensation for their report. Dr. Dorman is Senior Vice President and Chair of NERA's (National Economic Research Associates Inc., Economic Consulting) Global Antitrust Practice.
[1384] Dorman, Exhibit US-186, p. 1.
[1385] Dorman, Exhibit US-186, p. 1.
[1386] Dorman, Exhibit US-186, pp. 2-5.

of this, Dr. Dorman concludes that Professor Asker's model does not establish that any Washington State tax savings are passed-through to Boeing from its suppliers.[1387]

7.244 Drs. Smith and Brown also submit a report in response to Professor Asker's model. They criticize the lack of empirical evidence and argue that the model bears little resemblance to the realities of the aerospace sector.[1388] Drs Smith and Brown argue that the evidence relied upon by the European Communities regarding the structure of the LCA component market is inaccurate due to the use of selective quotes.[1389] According to Drs Smith and Brown, the market would have been better modeled as a bilateral monopoly, where the outcome regarding pass-through is "indeterminate with a vengeance".[1390]

7.245 In response to a Panel question, Drs Dorman and Terris insist that the level of pass-through of a subsidy is "highly sensitive to the choice of a pass-through model" and the model itself is sensitive to the assumptions underlying it.[1391] They suggest that establishing the degree of pass-through is a fact-specific enquiry that cannot be resolved by theoretical modeling. According to Drs Dorman and Terris, on the basis of existing economic knowledge and evidence, choosing any range narrower than zero to 100 per cent would be arbitrary.[1392]

7.246 The United States notes that the European Communities' expert, Professor Asker, has conceded that he cannot rule out the possibility that pass-through may be less than 100 per cent in certain circumstances.[1393] Given that the European Communities is attempting to prove that pass-through is at least 100 per cent, the admission by Professor Asker that this may not be so means that the European Communities has not met its burden of proof. In accepting that pass-through may be less than 100 per cent, the European Communities is acknowledging that it may be anywhere between zero and 100 per cent and therefore it has failed to prove that pass-through is greater than zero.[1394] Further, the United States contends that there is no basis on which the Panel can estimate the range of pass-through as anything more narrow than zero to 100 per cent.[1395]

7.247 The United States' position is that determining the rate of pass-through between a supplier and its downstream customer in any specific case "requires a complex analysis", taking into account a range of factors including competitive structure, demand and supply characteristics and cost structure.[1396] According to the United States, "it is not enough to apply economic models based on hypothetical assumptions about the market that are not supported by the facts".[1397] Rather, a "rigorous analysis of the facts and an explanation as to how they translate into the parameters of an economic

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[1387] Dorman, Exhibit US-186, p. 7.
[1388] Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, p. 1.
[1389] Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, pp. 4-5 .
[1390] Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, p. 8.
[1391] Gary J. Dorman and Kristin L. Terris, Economic Models and Subsidy Pass-Through, 30 July 2009, Exhibit US-1363, p. 3.
[1392] Gary J. Dorman and Kristin L. Terris, Economic Models and Subsidy Pass-Through, 30 July 2009, Exhibit US-1363, p. 8.
[1393] United States' comments on European Communities' response to questions 384 and 385, paras. 363 and 365.
[1394] United States' comments on European Communities' response to questions 384 and 393, paras. 364 and 372.
[1395] United States' response to question 394, para. 327.
[1396] United States' comments on European Communities' response to question 384, para. 356.
[1397] United States' comments on European Communities' response to question 384, para. 356.

analysis" is required.[1398] Further, "actual empirical work is needed to determine how the aerospace supplier markets fit into any of the theoretical models".[1399] The United States argues that it is not appropriate to draw conclusions in relation to the facts of this case from empirical studies that have been conducted in relation to other industries unrelated to the aerospace supplier market.[1400]

7.248 Although one of the expert reports adduced by the United States suggests that a "bilateral monopoly" may be an appropriate model in the aerospace supplier market, in response to a Panel question the United States rejects any suggestion that a "monopoly supplier" model may be appropriate.[1401] Rather, large civil aircraft markets are more likely to be characterized by differentiated oligopolies. The economic literature shows that pass-through in differential oligopoly markets is variable and a detailed empirical review is required to analyze the question.[1402]

7.249 The United States also discredits any reliance by the European Communities on the statements made by Governor Locke. The United States contends that in the quoted statements, Governor Locke was not addressing the pass-through question. Even if he was doing so, he was in no position to make such an evaluation because it is a complex economic and factual question.[1403]

7.250 The United States notes that the European Communities does not contend that the full amount of the tax reduction to Boeing's suppliers passes-through to Boeing because it attempts to exclude benefits to manufacturers that supply both Boeing and Airbus. The United States argues that the European Communities should also exclude benefits to component manufacturers that supply Boeing and other companies apart from Airbus.[1404] Further, the European Communities does not exclude from its calculation companies that are component manufacturers in the aerospace industry in Washington but that do not supply Boeing or Airbus at all.[1405]

7.251 Finally, in response to the European Communities' argument that the United States failed to provide it with the relevant data for the purposes of an empirical analysis of pass-through, the United States responds that the data would have been as easily available to the European Communities as to the United States, either through Airbus or through its own independent market research. The United States argues that Airbus operates in the same supplier markets as Boeing, including in the Washington State market.[1406]

Evaluation by the Panel

Amounts received directly by Boeing's LCA division

7.252 In quantifying the amount of the subsidies in issue in this dispute, the European Communities calculates the amounts for many of the taxation measures up until 2024. Our purpose in reaching a conclusion regarding the amounts of the subsidies is to assess the European Communities' serious prejudice case. As indicated at paragraphs 7.1676-7.1679 of this Report, we analyze the European Communities serious prejudice claim over the period 2004-2006. Further, we assess the effects of the subsidies in the year they are received. In particular, we do not evaluate the effects of subsidies prior to their receipt, as the European Communities would have the Panel do in relation to the recurring

[1398] United States' comments on European Communities' response to question 384, para. 356.
[1399] United States' comments on European Communities' response to question 384, para. 358.
[1400] United States' comments on European Communities' response to question 384, para, 361.
[1401] United States' response to question 393, para. 322.
[1402] United States' response to question 393, para. 322.
[1403] United States' response to question 231, paras. 380, 381.
[1404] United States' comments on European Communities' response to question 234, para. 427.
[1405] United States' first written submission, para. 467.
[1406] United States' comments on European Communities' response to question 393, para. 380.

subsidies that reduce marginal unit cost.[1407] Therefore, only the amounts of the taxation subsidies received up until 2006 play a part in our analysis of the European Communities' present serious prejudice case. Consequently, for the purposes of our present serious prejudice analysis, there is no need for us to quantify the amounts of subsidies expected to be received post-2006. Further, as explained at paragraphs 7.1851-7.1853 of this Report, the Panel exercises judicial economy in relation to that aspect of the European Communities' serious prejudice case based on threat. Therefore, there is no need for us to quantify post-2006 amounts for the purposes of a threat of serious prejudice analysis.

7.253 In relation to the *Washington B&O tax reduction,* given that it is calculated on an *ad valorem* basis, the subsidization rate on a per-aircraft basis remains constant irrespective of the sales and deliveries that take place in the relevant period. From 1 October 2005 until 30 June 2007, the B&O tax reduction in relation to manufacturing is equal to 0.06 per cent of gross proceeds of sale and from 30 June 2007 onwards is equal to 0.19 per cent of gross proceeds of sale.[1408] Therefore, the subsidization rate up until 2006 is 0.06 per cent of the gross proceeds of sale of each aircraft.[1409]

7.254 With respect to the dollar value of the benefit of the Washington B&O tax reduction to Boeing's LCA division, the parties agree that it is appropriate to base this estimate on the Washington State September 2003 presentation (reflected in the European Communities' calculations in Exhibit EC-21).[1410] The other possible source of information before the Panel for quantifying the amount of the tax reduction is the spreadsheet prepared by the Washington Department of Revenue.[1411] The spreadsheet estimates the benefit of the tax reduction to the entire industry, rather than only to Boeing. However, applying the estimate of the proportion of the benefit that will accrue to Boeing's LCA division that is found in the Washington State September 2003 presentation, namely 65 per cent, yields the identical amounts across the two exhibits. For these reasons, the Panel estimates that the amount of the B&O tax reduction received directly by Boeing's LCA division through 2006 is $13.8 million.

7.255 In relation to the *Washington B&O tax credits,* in our view, the European Communities' estimates are based on the best information available. The spreadsheet prepared by the Washington State Department of Revenue is the most recent estimate before the Panel of the amount of the tax

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[1407] See paras. 7.155-7.157 and 7.1812-7.1813 of this Report.

[1408] Although the B&O tax rate is reduced in relation to wholesale and retail sales as well as manufacturing activities, the European Communities acknowledges that if a business engages in both manufacturing and sales activities in the State of Washington, the business owes separate B&O taxes with respect to each activity but that a credit is allowed for multiple activities to prevent double taxation. The *Washington Administrative Code* provides that for products that are both manufactured and sold in Washington, "the payment of the manufacturing tax reported may be credited against the selling tax (i.e. the wholesaling and/or retailing B&O tax) reported". European Communities' first written submission, para. 104 and footnote 148. Therefore, if Boeing sells its aircraft in the State of Washington, the B&O taxes paid on its manufacturing activities will be credited against the B&O taxes paid on its sales. Therefore, in practice Boeing is required only to pay the B&O tax on its manufacturing activities and the tax reduction in relation to sales activities does not need to be quantified when assessing the value of the Washington B&O tax reduction to Boeing. This is consistent with the way in which the European Communities calculates the subsidization rate for the Washington B&O tax reduction. See Washington State and City of Everett B&O Tax Rate Reduction Subsidy Magnitudes Recalculated Based on Ad Valorem Rate Reductions, ITR, 26 March 2008, Exhibit EC-1385.

[1409] As indicated at para. 7.300, we conclude that the European Communities has not made out its "pass-through" case. Therefore, "pass-through" of the benefit of the tax reduction from component suppliers to Boeing does not alter the *ad valorem* subsidization rate.

[1410] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65.

[1411] Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184.

incentives under HB 2294.[1412] Given that the parties agree, and that it is the best information before us, we also consider it appropriate to rely upon the estimates in the Washington State September 2003 presentation for the percentage of each tax credit that is received by Boeing's LCA division relative to the aerospace industry as a whole.[1413] Although the United States argues that the quantification method used by the European Communities includes B&O tax credits to entities other than Boeing, this in fact is not the case. In calculating the amounts of the B&O tax credits to Boeing's LCA division, the European Communities attributes only the proportion of the tax credit that the Washington State September 2003 presentation estimates is received by Boeing's LCA division.[1414] The United States accepts that use of these proportions is appropriate.[1415]

7.256 In relation to the B&O tax credit for computer software and hardware, although the parties agree that Boeing received 100 per cent of the tax credit as estimated in the Department of Revenue spreadsheet, this results in an estimate that Boeing's LCA division received $20.4 million as a result of this credit. However, section 8 of HB 2294, under which the tax credit for computer software and hardware is authorized, provides that "total lifetime credit taken under this section by any one person may not exceed twenty million dollars". Therefore, on the basis of this, we conclude that $20 million is the maximum amount of B&O tax credit for computer software and hardware that Boeing's LCA division could have received. This subsidy was received by Boeing's LCA division during 2004-2005.

7.257 For these reasons, the Panel estimates that the amount of the B&O tax credit for preproduction development received by Boeing's LCA division through 2006, is $21.3 million[1416], the amount of the B&O tax credit for computer software and hardware is $20 million and the amount of the B&O tax credit for property taxes received by Boeing's LCA division through 2006 is $1.1 million.[1417]

7.258 In relation to the *sales and use tax exemption for computer hardware, peripherals and software,* the European Communities relies on estimates derived from the Washington State September 2003 presentation and set out in Exhibit EC-27.[1418] The estimates of the subsidy to Boeing's LCA division were calculated as 80 per cent of the amount of the subsidy provided to all entities. These amounts are close to identical to the estimates in the Washington State Department of Revenue spreadsheet. The amounts through 2006 consistently differ between the spreadsheets by $0.1 million each year.[1419] The fact that the estimates are almost identical suggests that the amounts in the Washington State Department of Revenue have already been adjusted to exclude entities other than Boeing. However, this is not clear from the Department of Revenue's spreadsheet. Further, in its

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[1412] Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184.

[1413] Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65.

[1414] See European Communities' second written submission, footnote 103.

[1415] United States' response to question 235, para. 392.

[1416] This is calculated by multiplying the value of the "R&D credit for aerospace design" received up to and including 2006, as estimated in Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184 (i.e. $32.7 million), by 65 per cent.

[1417] This is calculated by adding the estimates reported in Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184 for FY 2005 and FY 2006 for the "B&O credit for state and local property taxes paid on new construction related to the 7E7 plane".

[1418] See Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC, Exhibit EC-65 and State and Local Subsidies to Boeing LCA Division, Exhibit EC-27.

[1419] Compare State and Local Subsidies to Boeing LCA Division, Exhibit EC-27 and Washington State Department of Revenue Final HB 2294 Fiscal Note - 20-Year Spreadsheet, Exhibit US-184.

submissions, the United States seems to contest that this is the case.[1420] Given that there is some uncertainty regarding whether the estimates of the sales and use tax exemption for computer hardware, peripherals and software in the Department of Revenue spreadsheet include or exclude entities other than Boeing, it is most appropriate to rely on the estimates in the Washington State September 2003 presentation. Using this source, the Panel estimates that the amount of the sales and use tax exemption for computer hardware, software and peripherals to Boeing's LCA division through 2006 is $8.3 million.[1421]

7.259 With respect to the *sales and use tax exemption for construction services and equipment,* the *leasehold excise tax exemption* and the *property tax exemption* we have concluded at paragraph 7.151 that Boeing has never claimed these tax exemptions. Therefore, there is no subsidy to Boeing to be quantified.

Amount of the benefit "passed-through" to Boeing

The basis for a "pass-through" analysis under the SCM Agreement

7.260 In determining whether it is necessary to perform a pass-through analysis and, if so, under which provisions of the SCM Agreement this arises, it is useful to consider adopted panel and Appellate Body reports in which pass-through has been considered. Our review indicates that the issue has arisen in the context of countervailing duty, serious prejudice and prohibited subsidy cases.

Countervailing duty cases

7.261 Although the dispute between the European Communities and the United States does not arise under Part V of the SCM Agreement, it is useful to provide an overview of the cases involving an analysis of pass-through in the countervailing duty context. This is because some of the cases address the relevance of Article 1 of the SCM Agreement in the context of pass-through, which is an issue raised by the parties to this dispute. Further, the reasoning used by the Appellate Body and panels in finding a requirement to demonstrate pass-through under Part V of the SCM Agreement, may shed some light on whether there is also such a requirement under Parts II and III.

7.262 An analysis of the requirement to demonstrate pass-through in countervailing duty cases was conducted in *US – Canadian Pork,* a case arising under GATT 1947.[1422] The United States imposed countervailing duties upon pork from Canada, designed to offset subsidies provided by the Canadian Government to producers of live swine. The United States deemed that 100 per cent of the subsidies to swine producers had passed-through to pork producers, in circumstances where swine and pork production were separate industries composed of unrelated firms.[1423]

7.263 The panel found that a countervailing duty may be imposed on a product only if a subsidy has been bestowed upon that particular product. This conclusion was based on Article VI:3 GATT, which provides:

> "No countervailing duty shall be levied on any product … in excess of an amount equal to the estimated…subsidy determined to have been granted, directly or indirectly, on the…production…of such product."

[1420] United States' first written submission, para. 499 and United States' response to question 237, para. 394.

[1421] This is calculated by adding the estimates for FY 2004, FY 2005 and FY 2006.

[1422] *US – Countervailing Duties on Pork,* DS7/R, BISD 38S/30.

[1423] *US – Countervailing Duties on Pork,* DS7/R, BISD 38S/30, para. 2.8. See also, analysis of the case in Panel Report, *Mexico – Olive Oil*, para. 7.131.

7.264 The panel noted that the countervailing duty must be limited to the subsidy granted on the production of "such product". Therefore, the United States could impose a countervailing duty on pork only to the extent the subsidy had been determined to have been bestowed on its production, namely, only to the extent the subsidy to swine producers had passed-through to pork producers.[1424]

7.265 The issue of pass-through under the SCM Agreement, in a countervailing duty context, arose in *US – Softwood Lumber IV*.[1425] The Appellate Body upheld the panel's conclusion that a pass-through analysis was required in circumstances where the United States imposed countervailing duties on imports of softwood lumber, in response to subsidies provided by the Canadian Government to producers of inputs used in the production of such lumber. However, the Appellate Body found that no pass-through analysis was required where the producer of the inputs was related to the producer of the imported product subject to the countervailing duty.[1426]

7.266 The Appellate Body held that the requirement to conduct a pass-through analysis when a subsidy is provided to an input producer, but a countervailing duty is imposed on a downstream product, in circumstances where the producer of the input and the producer of the final product are unrelated, arises under Article VI:3 of GATT 1994 and consequently under Articles 10 and 32.1 of the SCM Agreement.[1427] The requirement arises under Articles 10 and 32.1 of the SCM Agreement because they provide, respectively, that Members must "take all necessary steps to ensure that the imposition of a countervailing duty … is in accordance with the provisions of Article VI of GATT 1994" and that "no specific action against a subsidy … be taken except in accordance with the provisions of GATT 1994". The Appellate Body reasoned that the phrase "subsid{ies} bestowed…*indirectly*", used in Article VI:3, indicates that financial contributions to inputs used in the production of a countervailed product are not excluded from the amount of subsidies that may be offset in the imposition of a countervailing duty.[1428] However, Article VI:3 requires that the countervailing duty not exceed the total amount of the subsidy granted on the "manufacture {or} production … of such *product*".[1429] Therefore, the duties imposed can only offset an input subsidy to the extent that the benefit of the subsidy passes-through to the processed product. In such circumstances, the Appellate Body held that pass-through cannot be presumed, but that an analysis of the extent of pass-through to the countervailed product is required.[1430]

7.267 The Appellate Body found that its conclusion on the necessity to demonstrate pass-through was supported by the definition of "countervailing duty" under footnote 36 of Article 10 of the SCM Agreement, which mirrors the definition used in Article VI:3 of GATT 1994. The Appellate Body also noted that the conditions in Article 1.1 must be established with respect to the product subject to the countervailing duty.[1431] This is necessary because of the requirement under Article VI:3 to calculate the extent to which a countervailed product is subsidized, rather than being a requirement arising independently under Article 1.1 of the SCM Agreement. Therefore, where a subsidy is provided to an input used in the production of the countervailed product, it must be established that the benefit arising from the financial contribution has passed-through via the input, to benefit indirectly the downstream countervailed product.[1432]

7.268 The Appellate Body concluded that "in the absence of such analysis, it cannot be shown that the essential elements of the subsidy definition in Article 1.1 are present in respect of the

[1424] *US – Countervailing Duties on Pork,* DS7/R, BISD 38S/30, para. 4.5.
[1425] Appellate Body Report, *US – Softwood Lumber IV*.
[1426] Appellate Body Report, *US – Softwood Lumber IV,* para. 147.
[1427] Appellate Body Report, *US – Softwood Lumber IV,* para. 143.
[1428] Appellate Body Report, *US – Softwood Lumber IV,* para. 140.
[1429] Appellate Body Report, *US – Softwood Lumber IV,* para. 141.
[1430] Appellate Body Report, *US – Softwood Lumber IV,* paras. 140 and 143.
[1431] Appellate Body Report, *US – Softwood Lumber IV,* para. 142.
[1432] Appellate Body Report, *US – Softwood Lumber IV,* para. 142.

{countervailed} product".[1433] In turn, the right to countervail an input subsidy to the extent of any pass-through of the benefit to the processed product would not have been established under Article VI:3 GATT 1994.[1434]

7.269 The issue of pass-through in the countervailing duty context arose again in *Mexico – Olive Oil*.[1435] The European Communities contested the imposition by Mexico of countervailing duties on imports of olive oil on the basis that a pass-through analysis had not been conducted. The European Communities argued that the Mexican investigating authority should have determined the extent to which any subsidies received by olive growers for the production of olive oil were passed through to the unrelated exporters of olive oil.[1436] In dismissing the claims of the European Communities, the panel noted that neither *US – Canadian Pork* nor *US – Softwood Lumber IV* established a requirement that a pass-through analysis be conducted whenever there is *any* transaction between unrelated companies in the chain of production of a product subject to a countervailing duty. For example, where a producer of the countervailed product receives a subsidy, there is no requirement that a pass-through analysis be conducted if the product is sold to a distributor prior to export.[1437]

7.270 In relation to the European Communities' specific claims in *Mexico – Olive Oil*, although *US – Softwood Lumber IV* established that the requirement to demonstrate pass-through arises under Article VI:3 of the GATT 1994, and consequently under Articles 10 and 32.1 of the SCM Agreement, in *Mexico – Olive Oil* the European Communities based its claim exclusively in Articles 1 and 14 of the SCM Agreement.

7.271 The European Communities' argument under Article 1 of the SCM Agreement essentially amounted to an allegation that Mexico did not properly calculate the amount of the benefit from the subsidy that was received by the exporters of the olive oil.[1438] The panel noted that although the non-existence of a benefit leads to the conclusion under Article 1.1 of the SCM Agreement that a subsidy does not exist, and therefore that a countervailing duty cannot be imposed, Article 1.1 does not include a requirement that the amount of benefit accruing to a direct or indirect recipient in a countervailing duty investigation be calculated.[1439] The panel concluded that "it is not necessary to identify the particular recipient…of the benefit and the particular manner in which a subsidy is bestowed in order to determine that a benefit has been conferred, and therefore that a subsidy exists, within the meaning of Article 1.1(b)".[1440]

7.272 The panel also dismissed the European Communities' claim under Article 14 of the SCM Agreement. The European Communities alleged that the Mexican investigating authority had failed to conduct a pass-through analysis where one was required and therefore that its explanation of how it calculated the amount of subsidization was not reasoned and adequate as required under Article 14, which provides:

> "For the purpose of Part V, any method used by the investigating authority to calculate the benefit to the recipient conferred pursuant to paragraph 1 of Article 1…shall be transparent and adequately explained."

[1433] Appellate Body Report, *US – Softwood Lumber IV*, para. 143.
[1434] Appellate Body Report, *US – Softwood Lumber IV*, para. 143.
[1435] Panel Report, *Mexico – Olive Oil*.
[1436] Panel Report, *Mexico – Olive Oil*, para. 7.125.
[1437] Panel Report, *Mexico – Olive Oil*, para. 7.144.
[1438] Panel Report, *Mexico – Olive Oil*, para. 7.150.
[1439] Panel Report, *Mexico – Olive Oil*, paras. 7.149 and 7.152.
[1440] Panel Report, *Mexico – Olive Oil*, para. 7.152.

7.273 The panel concluded that there was nothing in Article 14 requiring a Member to conduct a pass-through analysis.[1441] The panel also noted that even if Article 14 did contain such a requirement, it would find no basis upon which to conclude that the Mexican investigating authority had acted inconsistently with it. The authority gave reasons for its conclusion that no pass-through demonstration was required, namely because the subsidy was to the producers of olive oil, the product the subject of the countervailing duty investigation, and was bestowed on its production, rather than being a subsidy bestowed on the production of olives, an input into the production of olive oil. Applying the relevant standard of review, the panel held that this conclusion was reasonably supported by the evidence.[1442]

7.274 Therefore, following *Mexico – Olive Oil,* in which the panel clarified that Articles 1 and 14 SCM Agreement do not include an obligation for an investigating authority to demonstrate pass-through, *US – Softwood Lumber IV* remains the report that sets out the provisions under which such an analysis is required in the context of a countervailing duty case.

Serious prejudice case

7.275 In *US – Upland Cotton,* the adopted panel and Appellate Body reports address pass-through in the context of Part III of the SCM Agreement.[1443] The United States argued before the panel that it was necessary for Brazil to "establish the precise extent to which United States subsidies provided in respect of 'upland cotton' production were actually 'passed through' to the exporter, after having been processed and sold, before being traded".[1444] The panel held that, due to textual differences between Parts III and V of the SCM Agreement, the Appellate Body jurisprudence on pass-through in *US – Softwood Lumber IV,* conducted under Part V of the SCM Agreement, was not directly applicable to an examination of serious prejudice under Articles 5(c) and 6.3(c) of Part III.[1445]

7.276 The Appellate Body held that the panel did not err in its assessment of the amount of the subsides for the purpose of its analysis under Article 6.3(c) of the SCM Agreement. In coming to this conclusion, the Appellate Body noted:

> "{T}he requirement in Article VI:3 of the GATT 1994 and Article 19.4 of the SCM Agreement that countervailing duties on a product be limited to the amount of the subsidy accruing to that product finds no parallel in the provisions on actionable subsidies and pertinent remedies under Part III of the SCM Agreement. Therefore, the need for a 'pass-through' analysis under Part V of the SCM Agreement is not critical for an assessment of significant price suppression under Article 6.3(c) in Part III of the SCM Agreement. Nevertheless, we acknowledge that the 'subsidized product' must be properly identified for purposes of significant price suppression under Article 6.3(c) of the SCM Agreement. And if the challenged payments do not, in fact, subsidize that product, this may undermine the conclusion that the effect of the subsidy is significant suppression of prices of that product in the relevant market."[1446]

7.277 In summary, the Appellate Body reasoned that because there is no need precisely to quantify the amount of subsidization in a serious prejudice claim, as opposed to the situation in a countervailing duty case, the need for a pass-through analysis in making an assessment of significant

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[1441] Panel Report, *Mexico – Olive Oil,* para. 7.159.
[1442] Panel Report, *Mexico – Olive Oil*, para. 7.168.
[1443] Appellate Body Report, *US – Upland Cotton*.
[1444] Panel Report, *US – Upland Cotton*, para. 7.1180.
[1445] Panel Report, *US – Upland Cotton*, para. 7.1181.
[1446] Appellate Body Report, *US – Upland Cotton*, para. 472.

price suppression under Article 6.3(c) is not essential. Nevertheless, the Appellate Body concluded that proving serious prejudice may be difficult without a demonstration that the subsidy in fact subsidized the producer of the product in issue.

Prohibited subsidy case

7.278 Pass-through in the context of Part II of the SCM Agreement was addressed in *Brazil – Aircraft (Article 21.5 – Canada II).*[1447] The facts of the case were that, after an aircraft was exported and paid for by a purchaser, the Brazilian Government provided non-refundable payments to the financial institution that loaned money to the purchaser for the purpose of buying the aircraft. The panel concluded that the purpose of the government intervention in the transaction was to allow the lender to offer better terms for the loan, to be used to purchase a Brazilian aircraft, than would otherwise have been possible.[1448]

7.279 The panel noted that, while there was no doubt that the payments conferred a benefit, the question remained whether they conferred a benefit to the *producers* of the aircraft.[1449] The panel held:

> "As the SCM Agreement is an Annex 1A agreement on trade in *goods,* and as this case relates to alleged export subsidies in respect of a particular good – Brazilian regional aircraft – it is incumbent upon Canada to establish that the benefit derived from {the} payments is not retained exclusively by the lender but rather is passed through in some way to producers of regional aircraft." [1450]

7.280 This passage suggests that the requirement to demonstrate pass-through arose because the export subsidy claim was made in relation to a specific product, namely Brazilian regional aircraft. Therefore, it was necessary for the claimant to establish that the producer of that product received a benefit from the government's financial contribution.[1451] Establishing a benefit to an unrelated financial institution was not sufficient. Further, because the SCM Agreement regulates trade in goods, it was necessary to demonstrate that a good, rather than merely a financial service, was subsidized.

"Pass-through" in the context of this dispute

7.281 The parties to the dispute agree that there is a requirement to demonstrate that the benefit of the B&O tax reduction to the component manufacturers passes-through to the Boeing LCA division and that this requirement arises under Articles 5 and 6 of the SCM Agreement. It appears that the United States also makes a separate submission which asserts that a requirement to demonstrate pass-through in a serious prejudice claim can be found in Article 1 of the SCM Agreement.

7.282 In *US – Upland Cotton* the Appellate Body indicated that pass-through is not critical for a price suppression causation analysis but that it is necessary to identify the "subsidized product" in a price suppression claim and if the financial contribution does not "subsidize" the product, this may undermine the proof of causation.

[1447] Panel Report, *Brazil – Aircraft (Article 21.5 – Canada II)*.
[1448] Panel Report, *Brazil – Aircraft (Article 21.5 – Canada II)*, para. 5.31.
[1449] Panel Report, *Brazil – Aircraft (Article 21.5 – Canada II)*, para. 5.27.
[1450] Panel Report, *Brazil – Aircraft (Article 21.5 – Canada II)*, para. 5.27, footnote 41.
[1451] The Panel also stated (in para. 5.28, footnote 42) that if Canada could establish that the payments to lenders passed-through to the purchasers in the form of improved terms of credit, this would constitute a prima facie case that the payments benefited the producers of the aircraft. This is because the effect of the payments would be to lower the cost of purchasing Brazilian aircraft, increasing the competitiveness of the producers.

7.283 Articles 5 and 6 of the SCM Agreement do not include provisions equivalent to those under Part V, which, as established in *US – Softwood Lumber IV*, require a specific quantification of the alleged subsidy, and an allocation of it to a specific product, to ensure that the countervailing duty imposed does not exceed the amount by which the production of the product is subsidized. This difference between Parts III and V was confirmed by both the panel and the Appellate Body in *US – Upland Cotton*.[1452] It is these provisions under Part V that have been found to give rise to the requirement to demonstrate pass-through in a countervailing duty context. As the provisions have no analogue under Part III, the basis for any requirement to demonstrate pass-through is necessarily different.

7.284 We note that Articles 5 and 6.3(c) of the SCM Agreement require the establishment of a "causal link between the subsidy and the significant price suppression".[1453] In our view, in those cases in which an upstream supplier receives a subsidy, but the argument is that this subsidy causes price or sales effects through the products of a downstream producer, it will be very difficult, to say the least, to demonstrate that this is indeed the effect without demonstrating, as one part of the causation analysis under Articles 5 and 6, that there is a link between the subsidy provided to the upstream producer and the downstream "subsidized product".[1454]

7.285 As a matter of logic, on the European Communities' own case regarding causation of serious prejudice, it seems clear that it will have to demonstrate a link between the subsidy to the component manufacturers and Boeing LCA in order to succeed in its serious prejudice argument in relation to the tax reductions to LCA component manufacturers. The European Communities argues that the effect of the subsidy is price suppression, lost sales and displacement of exports and that this is occurring through a particular product, namely Boeing LCA. To demonstrate this, the European Communities needs to demonstrate a link between the subsidy to the upstream supplier and the allegedly "subsidized product", namely Boeing LCA. In order to do so, the European Communities sets out to demonstrate that the tax reductions received by Boeing's upstream suppliers lead to reduced prices for the inputs it uses in its LCA. After establishing this link, the final step in the European Communities' causation analysis is to prove that the Boeing LCA cause price suppression, lost sales and displacement of exports for Airbus because, in response to receiving the benefit of the subsidy, Boeing reduces the prices charged for its subsidized LCA.

7.286 Our conclusion that any need to demonstrate "pass-through" in a serious prejudice case arises under Articles 5 and 6 of the SCM Agreement accords with *US – Upland Cotton,* in which the Appellate Body held that a pass-through analysis under Part III is "not critical", but in certain cases if the product in issue is not in fact "subsidized", this will undermine the conclusion that the subsidy causes serious prejudice.

7.287 However, we query whether there is a need to categorize the demonstration of link between a subsidy provided to an upstream producer and the downstream product, in order to establish that

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[1452] See e.g. the panel's conclusion at para. 7.1177: "we decline to transpose directly the quantitative focus and more detailed methodological obligations of Part V, into the provisions of Part III of the SCM Agreement." See also, the Appellate Body at para. 472: "{T}he requirement in Article 6.3 of the GATT 1994 … finds no parallel … under Part III of the SCM Agreement."

[1453] Panel Report, *US – Upland Cotton*, para. 7.1341. Article 5 of the SCM Agreement provides that "no Member should *cause*, through the use of any subsidy … adverse effects", while Article 6.3(c) stipulates that serious prejudice arises when "*the effect of the subsidy* is…significant price suppression" (emphasis added).

[1454] The effects that are identified in Article 6.3 as constituting serious prejudice in the sense of Article 5(c) all relate to effects of a subsidy through specific *products*. For example, in Article 6.3(a) and (b), serious prejudice requires that the effect of the subsidy is to displace imports or exports of "like products", where Article 6.4 clarifies that it is by reference to the "subsidized product" that like products are to be identified. Similarly, in Article 6.3(c), serious prejudice arises where a "subsidized product" undercuts the price of like products.

product is in fact subsidized, as "pass-through". To date, panel and Appellate Body reports on pass-through have largely been confined to countervailing duty cases in which there is a need precisely to quantify the amount of a subsidy bestowed on the production of the countervailed product. However, under Part III of the SCM Agreement there is no need for such a calculation. Nevertheless, when a subsidy is provided to an upstream supplier and serious prejudice is alleged to occur through the product of a downstream producer, a link between the subsidy and the product will usually need to be demonstrated to prove that the subsidy is the cause of the serious prejudice. However, we consider this merely to be one element of the proof of causation, rather than being a separate "pass-through" requirement under Articles 5 and 6. In our view, neither element of the European Communities' serious prejudice case, in which it first attempts to prove that the component suppliers lower the price of their inputs and secondly attempts to demonstrate that Boeing ultimately lowers the price of its aircraft when sold to end-users, should be characterized as "pass-through". Rather, both are merely steps in proving that the tax reductions to component manufacturers cause serious prejudice.[1455]

7.288 It appears to us that the United States makes two separate arguments regarding the legal basis for any requirement to demonstrate pass-through in a serious prejudice case. The first, in its written submissions, is based exclusively in Article 1 of the SCM Agreement. It relies on *US – Softwood Lumber IV* to support the proposition that where the recipient of a subsidy is unrelated to the producer of the allegedly subsidized product, the *subsidy will exist* only if the benefit is passed-through to the producer of the downstream product. For the foregoing reasons, to the extent the United States argues that Article 1 of the SCM Agreement includes any obligation to conduct a pass-through analysis, we disagree and find that the "pass-through" analysis is conducted under Articles 5 and 6.

Has the European Communities demonstrated "pass-through"?

7.289 Before commencing the analysis of the European Communities' "pass-through" case, we put it in context by considering the amount of pass-through in issue. While the European Communities argues that $1.05 billion in B&O tax reductions is passed-through to Boeing's LCA division from Washington State component manufacturers, this is the amount expected to be passed-through over the period 2006-2024.[1456] As indicated at paragraphs 7.1676-7.1679 of this Report, in the context of the serious prejudice analysis, the Panel assesses the effects of the subsidies up until 2006. During this period, the amount of the B&O tax reduction that the European Communities estimates is received by component suppliers is $6.8 million.[1457] We note, as described at paragraphs 7.155-7.156 of this Report, that for the purposes of arriving at estimates of per-LCA subsidy "magnitudes", the European Communities allocates recurring subsidies that reduce marginal unit cost to the year three years prior to their actual receipt. The European Communities uses this allocation method for the entire amount of the Washington B&O tax reduction, including the amount it estimates will be passed-through to Boeing from its suppliers.[1458] However, the Panel does not consider it necessary to

[1455] Proof that the manufacturer of the "subsidized product" reduces the prices charged for the product to end users arises in all cases in which price-related serious prejudice is claimed, whether or not the subsidy is provided directly to the manufacturer of the product or indirectly via an upstream supplier. Although whether the producer ultimately reduces its prices to end users may depend on the same sort of factors as whether the upstream supplier reduces it prices to the downstream producer, the former has never, in previous panel or Appellate Body rulings, been found to require a pass-through analysis. Rather, it is considered merely to be one step in the causation demonstration. This supports our conclusion that it is appropriate to treat the reduction of prices between upstream and downstream entities in the same manner, namely as a part of the causation demonstration, rather than as part of a separate "pass-through" analysis.

[1456] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17.

[1457] Estimates of Benefits from Washington State B&O Tax Rate, Exhibit EC-21.

[1458] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Table 4. The amount of the B&O tax reduction that is being allocated to the year three years prior to receipt is the amount received directly

arrive at per-LCA subsidy "magnitudes", and assesses the effects of each subsidy in the year of its receipt.[1459] Therefore, the amount of the tax reduction received by component suppliers that is alleged to pass-through during the time period of relevance to our serious prejudice analysis is $6.8 million.

7.290 To prove pass-through of the B&O tax reduction to Boeing's LCA division from its suppliers, the European Communities relies upon statements made by Governor Gary Locke as well as a number of reports prepared by its economists. We note that at least one of Governor Locke's statements is an explicit assertion that pass-through will occur: "if we can reduce the tax burden on the suppliers, those benefits will be passed on to Boeing".[1460] In determining whether or not Boeing's suppliers passed-through the benefit of the B&O tax reduction, we accord some weight to Governor Locke's statements. They indicate that the intent in providing tax reductions to LCA component manufacturers was to reduce Boeing's costs. However, in order to find in favour of the European Communities with respect to its pass-through submissions, we require something more than a political statement revealing the government's intent in passing the legislation. The statements need to be read in the light of the context in which they were delivered, namely the Governor attempting to promote the advantages of a costly package of incentives provided by the State to private entities. Further, the question of the extent to which a subsidy to an upstream supplier passes-through to a downstream producer is essentially an economic one. Therefore, although we weigh Governor Locke's statements in the assessment of the European Communities' evidence, we place most reliance upon the reports of the economists.

7.291 At various stages in its reports and submissions, the United States appears to suggest that the only way to prove pass-through is via an empirical analysis.[1461] In reaching our conclusion on the facts of this case, we do not endorse the United States' position in this regard. In particular, we do not intend to limit the potential methods that may be used successfully to prove pass-through, which in appropriate circumstances could include the use of a commercial benchmark price or a theoretical model that accurately reflects the conditions in the market in question.

7.292 The Panel recalls that Professor Asker's economic model aims to demonstrate that an *ad valorem* subsidy paid to an input supplier passes-through to the downstream producer at the rate of at least 100 per cent. Although the European Communities claims that the lower bound of Professor Asker's estimate passed-through to Boeing, namely 100 per cent of the benefit of the subsidy, in his analysis Professor Asker contemplates the possibility of greater than 100 per cent pass-through. It is our understanding that when the European Communities refers to pass-through exceeding 100 per cent, it is referring not only to pass-through of the benefit of the subsidy, but is also referring to an additional effect on the price of the inputs arising as pass-through of the benefit occurs. The benefit of a subsidy, as that term is used in Article 1.1(b) of the SCM Agreement, cannot increase when it passes from the recipient of the financial contribution to another entity. In other words, the maximum amount of any pass-through that can occur is the amount of the benefit of the subsidy,

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by Boeing plus the amount "passed-through" to Boeing. See Estimates of Benefits from Washington State B&O Tax Rate, Exhibit EC-21.

[1459] We note that the European Communities does not provide an explanation regarding why this is an appropriate method to allocate the benefit that is "passed-through" from component manufacturers. In particular, the European Communities does not explain why the tax reductions to component manufacturers will have an effect on Boeing's behaviour three years prior to the component manufacturer receiving the tax reduction.

[1460] European Communities' non-confidential oral statement at the second meeting with the Panel, para. 20. See also, European Communities' second written submission, para. 57.

[1461] See e.g. Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, where Smith and Brown criticize the European Communities' case on the basis that it makes "no attempt to present empirical evidence". In its Comments on the European Communities' response to question 394, the United States argues at para. 381 that "a purely theoretical answer to the pass-through question – as the EC appears to advocate – is simply not possible".

which in the context of the SCM Agreement, is the amount by which the terms of the financial contribution are more favourable than those available on the market.[1462] The calculation of the amount of the benefit is a one-time calculation made at the time the financial contribution is provided. As noted in *US – Upland Cotton (Article 22.6 – US I)*, there is no "additional" benefit, beyond that identified under Article 1.1(b).[1463] Therefore, any decrease in the price of the inputs that exceeds the benefit of the subsidy cannot be considered pass-through of the benefit. Rather, we understand the European Communities to be referring to an additional reduction in price, which is a flow-on effect of passing-through the benefit. Professor Asker explains that when the price of the inputs is lowered in order to pass-through the benefit of the subsidy, this has a negative effect on revenue but a positive effect on demand. Due to certain assumptions incorporated within his model, the increase in demand outweighs the decrease in revenue such that price can be further decreased without affecting suppliers' initial profit margins, and more strongly so at low levels of competition between suppliers.[1464] It is this reduction in price beyond the value of the benefit which Professor Asker refers to in stating that pass-through can exceed 100 per cent.

7.293 In considering the European Communities' economic model, we note that the principal concern of the United States is that the model does not reflect the realities of the market for the supply of LCA components. In particular, the United States criticizes the assumptions that Boeing is a monopsonist with respect to every input it purchases, that price is the sole consideration in Boeing's choice of supplier, that input suppliers have an equal and constant marginal cost of production, that the only source of market power for suppliers is asymmetric information and that all bidders may receive the same subsidy.[1465] In essence, the United States argues that these conditions do not exist in the market for the supply of LCA components.

7.294 Professor Asker responds to each of these concerns by arguing either that it is not relevant or that the model can accommodate the changes in the assumptions suggested by the United States, without the conclusion of the model changing.[1466] For example, in relation to the assumption that Boeing chooses the supplier that quotes the lowest price, the United States argues that price is only one of many considerations in Boeing's sourcing decisions, given that it operates in an industry where small deviations from quality standards can have severe financial and professional consequences. The United States concludes that if contracts are awarded on the basis of non-price considerations, the conclusions of Professor Asker's model no longer apply.[1467] However, Professor Asker rebuts this argument by explaining that making price the determinative feature of the contract award process is a convenient simplifying assumption that is not essential for model results. He points to the procurement literature, which shows that the standard results in competitive tendering frameworks apply to more general and complex procurement settings where price and other product/supplier features are important in determining the final award. The reason for this is that a combination of

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[1462] Appellate Body Report, *Canada – Aircraft*, para. 157.

[1463] Arbitrator's Report, *US – Upland Cotton (Article 22.6 – US I)*, para. 4.148.

[1464] Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, including Dr. John Asker, On the Pass-Through of Ad Valorem Subsidies Received by Input Suppliers, 1 November 2006, Exhibit EC-16, page 11 of Annex A. Professor Asker states that "{T}he reduction in revenue from lowering an initially high price per unit is offset to a large extent by the increase in the amount of the input required by the monopsonist, allowing the price to be reduced further".

[1465] Dorman, Exhibit US-186, pp. 2-5 .

[1466] See Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174.

[1467] Dorman, Exhibit US-186, p. 3; Economic Analysis of the European Community's Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, p. 11 and Gary J. Dorman and Kristin L. Terris, Economic Models and Subsidy Pass-Through (July 30, 2009), Exhibit US-1363, p.5.

price and quality (however defined) generates some level of utility for the purchaser that can be mapped to a "score" or "price equivalent".[1468]

7.295 Although Professor Asker provides a range of arguments showing that his model can accommodate most of the changes in the assumptions suggested by the United States without changing the conclusion that pass-through is always at least 100 per cent[1469], the assumption that all of Boeing's suppliers are eligible to receive the Washington B&O tax reduction is problematic for the European Communities' case. According to the evidence on the record, Boeing sources its LCA components from a global supplier market.[1470] Therefore, the assumption in Professor Asker's model that all suppliers may receive the subsidy is clearly not an accurate one. Only those suppliers with a taxable presence in Washington State are eligible for the tax reduction. Further, Professor Asker acknowledges that if this assumption does not hold, the conclusion of the model, that pass-though of an *ad valorem* subsidy is always at least 100 per cent, is no longer accurate.[1471] In particular, Professor Asker states that if only a subset of suppliers is eligible for the subsidy, this changes the relative competitiveness of the suppliers. Professor Asker states that modeling such a market structure "requires the use of tools from asymmetric first price auctions for which no closed form results exist".[1472] Therefore, Professor Asker concludes that he is "unable to rule out the possibility that there is less than 100% pass-through".[1473] Professor Asker moderates this conclusion by stating that the extent of pass-through is affected only if there is a "material" change in competitiveness, which is most likely in input markets with relatively few suppliers.[1474] However, in markets where there are relatively few suppliers, Professor Asker's model predicts that the rate of pass-through is higher than in markets with a greater number of suppliers. Therefore, Professor Asker concludes that even though the extent of pass-through may be reduced when only a subset of suppliers receive the subsidy, "it would require a very fine balancing of economic factors for the net effect to be that pass-through is reduced below 100%".[1475]

7.296 A further problem with Professor Asker's model, which is implied in the United States' submissions, is that Professor Asker does not sufficiently justify why his analysis commences with the benchmark of perfect competition. Professor Asker's model demonstrates that, from a given benchmark, pass-through increases as the number of suppliers decrease. He then chooses the benchmark of perfect competition, under which pass-through is 100 per cent, and concludes that as the number of suppliers decreases, pass-through increases to above 100 per cent. However, the choice of perfect competition and consequently 100 per cent pass-through as the starting point for the

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[1468] Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, p. 5.

[1469] See Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, for all of Asker's responses to the United States' criticisms about the assumptions underlying the model.

[1470] See e.g. Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, 2 March 2007, Exhibit EC-10, para. 53(iii); Economic Analysis of the European Community's Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, p. 10, where the United States claims that only a small proportion of Boeing's suppliers are located in Washington State; and Bair Affidavit, Exhibit US-7, which discusses Boeing's global supplier network.

[1471] Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 16 and Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, p. 10.

[1472] Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 16.

[1473] Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 16.

[1474] Asker explains that in markets where there are many suppliers, competitive pressures are likely to be maintained, even when a subset of the suppliers receive a sizeable subsidy.

[1475] Dr. John Asker, Reply to Report of Dr. Gary Dorman and to Related Aspects of Report of Drs. Stephen D. Smith & Lorrie Brown, October 2007, Exhibit EC-1174, p. 10.

analysis may not be as obvious as implied by Professor Asker. The United States' criticism of this aspect of the model is evident, for instance, in its observation that Boeing's suppliers are in fact diverse and highly specialized.[1476] This problem with the model provides further support for the conclusion in the preceding paragraph that Professor Asker's model does not necessarily lead to the conclusion that pass-through is always greater than 100 per cent.

7.297 The reports submitted by the European Communities and prepared by its economists attempt to establish pass-through by proving that pass-through is always at least 100 per cent for *ad valorem* subsidies. For the reasons expressed in the preceding two paragraphs, we conclude that the economic model prepared by Professor Asker does not in fact demonstrate that pass-through is always at least 100 per cent. Therefore, we are in the situation where the European Communities has not made its case in proving that pass-through is always 100 per cent or higher and where it has not attempted to make a case regarding any other level or range of pass-through. Therefore, given that we do not accept the conclusion arising from Professor Asker's model, we have nothing on which to base any determination regarding pass-through. The level of pass-through could be 90 per cent, 50 per cent or zero, but we are left with no way in which to assess this. In fact, the possibility of zero pass-through is not entirely theoretical. The United States provides an example, related to the fact that not all suppliers are eligible for the subsidy, in which it contends that pass-through may be zero. In particular, the United States refers to a scenario in which two suppliers, A and B, are competing in a tender and absent the subsidy A is the low-cost supplier and bids the lowest input price. If A receives the subsidy but B does not, there is no reason for A, as the low-cost supplier, to pass-through any of the subsidy because it can already underbid B and win the tender.[1477] Although in response to question 385 Professor Asker discusses the scenario in which B receives the subsidy, he does not discuss the scenario which is later postulated by the United States in its final set of comments, in which A receives the subsidy.[1478] Therefore, we are in the position where pass-through may range from zero to 100 per cent and the European Communities has not provided a basis upon which we can narrow this down. In response to a Panel question, Professor Asker explicitly states that beyond the estimate he has provided, namely at least 100 per cent pass-through, which we do not accept as always holding true, he is not able to provide an alternative estimate. For the foregoing reasons, in the Panel's view the European Communities has not established its pass-through case. Although in the light of Governor Locke's statement the Panel recognizes that it may seem somewhat counterintuitive to conclude that there was no pass-through, the European Communities has argued an all or nothing case. While it is conceivable that some degree of pass-through occurred, there is nothing on the record to allow the Panel to make a defensible estimate of this. Therefore, the Panel concludes that the European Communities has not made out its pass-through argument.

7.298 In the light of the problems we have identified with the European Communities' model, which in our view are fatal to the European Communities' arguments on pass-through, it is not necessary for us to resolve certain factual questions in issue between the parties, including whether, as suggested by the United States, the market for LCA components would have been more accurately represented as a bilateral monopoly or a differentiated oligopoly. In addition, it is not necessary for us to resolve the factual question of whether the competitive tendering process is an accurate reflection of the way in which Boeing chooses its suppliers. We note that the evidence presented by the European Communities indicates that at least some Boeing LCA components are indeed purchased through a competitive tendering process, as reflected in Professor Asker's model.[1479] However, even

[1476] Economic Analysis of the European Communities' Assertion Regarding Pass-Through Taxes in the Washington State Aerospace Market, Exhibit US-185, p. 8 and Dorman, Exhibit US-186, p. 6.

[1477] United States' comments on European Communities' response to question 385, paras. 367-368.

[1478] Dr. John Asker, Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 16.

[1479] For example, the European Communities quotes a statement from the Boeing website, namely that "our company emphasizes the importance of competitive bidding as a good business practice". Dr. John Asker,

finding in the European Communities favour on this point would not cure the problems we have identified with the model and would not alter our conclusion.

7.299 With respect to the European Communities' argument that the United States refused to supply it with the data required to conduct an empirical analysis, we recall that the European Communities has acknowledged that Airbus also purchases supplies in the Washington State market. As a result, in our view, the European Communities would also have had access to information about the market. Therefore, we decline to draw any adverse inferences against the United States in relation to this issue.

7.300 For these reasons, the Panel finds that the European Communities has not demonstrated that the benefit of the B&O tax reduction received by Boeing's suppliers with a taxable presence in Washington passed through to Boeing. Consequently, the Panel finds that the benefit passed-through to Boeing from its component suppliers is $0. Therefore, the Panel finds that the total amount of the B&O tax reduction to Boeing's LCA division is limited to the amount received directly by Boeing's LCA division, namely $13.8 million.

(vi) Summary of conclusions regarding the Washington taxation measures under HB 2294

7.301 The foregoing analysis and conclusions addressed the question of whether the following measures constitute specific subsidies to Boeing within the terms of the SCM Agreement:

(a) the Washington B&O tax reduction;

(b) the B&O tax credits for preproduction development, computer software and hardware and property taxes;

(c) the sales and use tax exemptions for computers, construction and equipment;

(d) the leasehold excise tax exemptions; and

(e) the property tax exemptions.

7.302 **For the foregoing reasons, the Panel finds that the Washington B&O tax reduction; the B&O tax credits for preproduction development, for computer software and hardware and for property taxes; and the sales and use tax exemption for computer hardware, peripherals and software are specific subsidies to Boeing within the meaning of Articles 1 and 2 of the SCM Agreement. The Panel estimates that the amounts of the subsidies to Boeing's LCA division are $13.8 million; $21.3 million; $20 million; $1.1 million; and $8.3 million respectively.**

7.303 **Finally, the Panel finds that the European Communities has not demonstrated that the sales and use tax exemption for construction services and equipment, the leasehold tax exemption and the property tax exemption are subsidies to Boeing.**

Responses to Questions 384, 385, 393 and 394 from the DS353 Panel, 28 July 2009, Exhibit EC-1437, p. 12. Exhibit EC-1437 also refers to evidence from procurement surveys showing the use of competitive bidding among suppliers in the aerospace industry. Evidence submitted by the European Communities in another context demonstrates that for inputs such as engines, LCA manufacturers organize a competition between suppliers at the development stage in order to put long-term pricing and performance pressure on suppliers. Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, 2 March 2007, Exhibit EC-10, para. 91. This indicates that a competitive tendering process may be used for more components than merely "off-the-shelf commodity parts" as suggested by the United States. Dorman, Exhibit US-186, pp. 6-7.

BCI deleted, as indicated **[***]**

(b) City of Everett local B&O tax reduction

(i) Introduction

7.304 The European Communities argues that a tax reduction introduced in the City of Everett constitutes a financial contribution and confers a benefit under Article 1 of the SCM Agreement. Further, the subsidy is specific within the meaning of Article 2. The European Communities estimates that the amount of the subsidy to Boeing's LCA division is $67.5 million over the period 2006-2023.

7.305 The United States argues that the tax reduction is not a subsidy because the City of Everett is not foregoing any revenue otherwise due, as required under Article 1.1(a)(1)(ii) of the SCM Agreement.

(ii) The measure at issue

7.306 The City of Everett imposes a B&O tax, which is similar to that imposed by Washington State. It is a tax upon gross revenues, which in the case of manufacturing is generally treated as the value of products manufactured, and in the case of retailing or wholesaling, as the gross proceeds of sale. It applies to all business activities occurring within the limits of the city of Everett.[1480]

7.307 Prior to the passing of Ordinance 2759-04 in 2004, the City of Everett B&O tax was imposed at a rate of 0.1 per cent. Under the MSA, the City of Everett made the following commitment:

> "The City recognizes that a more simplified, predictable and long-term reduction of the City B&O Tax is an important consideration as Boeing contemplates the siting of Project Olympus. Accordingly, the City shall negotiate in good faith and use all diligent efforts to reach agreement with Boeing on a permanent City B&O Tax rate reduction. The City hereby commits that any such reduction shall provide a benefit to Boeing in accordance with the terms and conditions set forth in Exhibit B-8." [1481]

7.308 In 2004, the City of Everett passed Ordinance 2759-04, which reflects the negotiations and commitment referred to in the MSA.[1482] Section 1 of the Ordinance provides:

> "As a result of diligent good faith negotiations the City of Everett and The Boeing Company have agreed on a Business and Occupation tax reduction to be permanent for the calendar years 2006 through 2023. During such period the City of Everett agrees not to suspend, revoke or require repayment of such reduction as authorized by its Business and Occupation tax reduction, provided that final assembly of the 7E7 Aircraft begins by December 31, 2007." [1483]

7.309 The Ordinance amends Chapter 3.24 of the Everett Municipal Code. The upshot of the amendment is that the B&O tax rate "upon every person engaging within the city in business as a manufacturer" is:

[1480] European Communities' first written submission, para. 145; United States' first written submission, para. 512; and Everett Mun. Code ch. 3.24 (2004), Exhibit EC-104.

[1481] European Communities' first written submission, paras. 146-148; United States' first written submission, para. 512; and MSA, Article 4.3, Exhibit EC-58.

[1482] European Communities' first written submission, para. 147.

[1483] Everett Ordinance 2759-04 (2004), Exhibit EC-61.

BCI deleted, as indicated **[***]**

Time period	Tax rate
1 January 2006 – 31 December 2009	0.1% for the first $6 billion in value of products manufactured and 0.025% thereafter.
1 January 2010 – 31 December 2015	0.1% for the first $7 billion in value of products manufactured and 0.025% thereafter.
1 January 2016 – 31 December 2023	0.1% for the first $8 billion in value of products manufactured and 0.025% thereafter.
1 January 2024	0.1%

(iii) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

Arguments of the European Communities

7.310 The European Communities argues that the City of Everett's B&O tax reduction results in a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement because the City is required to forego tax revenue that it would otherwise have collected.[1484]

7.311 The European Communities recalls that an analysis of whether revenue otherwise due is foregone within the meaning of Article 1.1(a)(1)(ii) requires a comparison of the contested measure with a normative benchmark. A "but for" test can be used for the purposes of this comparison if it is possible to classify the measure in issue as an "exception" to a "general" rule of taxation.[1485]

7.312 According to the European Communities, Ordinance 2759-04 sets up an exception to a general rule. The general rule or "normative benchmark" is Section 3.24.050(B) of the Everett Municipal Code, as it existed prior to the enactment of Ordinance 2759-04, when it provided:

> "Upon *every person* engaging within the city in business as a manufacturer; as to such persons the amount of the tax with respect to such business shall be equal to the value of the products, including byproducts, manufactured, multiplied by the rate of one tenth of one percent (.001)." [1486]

7.313 The amendment enacted through Ordinance 2759-04 keeps this language intact but at the end adds the phrase "*except* as provided as follows" and then lists the rate reductions.[1487]

7.314 Therefore, the European Communities submits that but for Ordinance 2759-04, the City of Everett would collect additional B&O tax revenue from manufacturers that make products worth more than $6 billion, $7 billion or $8 billion, depending on the time period in issue.[1488] The European Communities argues that the City of Everett "gave up a real entitlement to charge all manufacturers, regardless of the value of the products they manufacture in Everett, a B&O tax rate of 0.1%" and as a result, there is a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.[1489]

7.315 In response to the United States' argument that the City of Everett does not forego revenue that would otherwise be due because the B&O tax reduction applies to all entities engaged in

[1484] European Communities' first written submission, para. 151.
[1485] European Communities' second written submission, para. 88.
[1486] European Communities' second written submission, para. 89 (emphasis added).
[1487] European Communities' second written submission, para. 89. See also, Everett Ordinance 2759-04 (2004), Exhibit EC-61.
[1488] European Communities' second written submission, para. 89.
[1489] European Communities' second written submission, para. 90.

manufacturing in Everett, the European Communities argues that this is not only inaccurate but also irrelevant because it conflates the specificity analysis with the financial contribution analysis.[1490]

7.316 The United States again submits that only revenue actually foregone, rather than revenue to be foregone in the future, can constitute a financial contribution. The European Communities' response to this is the same as that outlined in relation to the tax measures under HB 2294.

7.317 The European Communities' argument in the alternative is that there is a potential direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement because the MSA requires the City of Everett to provide Boeing with a remedy of equivalent economic effect if it cannot provide the B&O tax rate reduction.[1491]

7.318 Finally, the European Communities argues that the City of Everett B&O tax rate reduction confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. This is because it provides Boeing with advantages on non-market terms. The European Communities notes that in *US – FSC*, the panel held that the foregoing of taxes that would otherwise be due "clearly confers a benefit".[1492]

Arguments of the United States

7.319 The United States argues that the City of Everett B&O tax rate reduction does not constitute a financial contribution because the City is not foregoing any revenue otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement. The United States reasons that "since this tax rate reduction applies to all entities engaged in manufacturing in the City, it is not the case that any revenue foregone would have been otherwise due".[1493]

7.320 In the event the Panel disagrees with its position and finds that there is a financial contribution, the United States submits that the financial contribution includes only revenue that has actually been foregone and does not include revenue to be foregone in the future, for the same reasons as outlined in relation to the Washington B&O tax rate reduction.[1494]

7.321 The United States does not make any submissions in relation to benefit.

Evaluation by the Panel

7.322 As indicated in the analysis of the Washington State taxation measures, the Appellate Body established in the compliance proceedings in *US – FSC* that if a general rate of taxation and exception to it can be identified, a "but for" test may be applied in determining if a financial contribution has been made under Article 1.1(a)(1)(ii) of the SCM Agreement. In other circumstances, the challenged taxation measure should be compared to the treatment applied to comparable income for taxpayers in comparable circumstances in the economy of the Member in question.[1495]

7.323 In our view, in the case of the City of Everett B&O tax, following the amendment to the Everett Municipal Code by Ordinance 2759-04, there is a standard B&O tax rate and a preferential rate introduced by the amendment that results in the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement. Ordinance 2759-04 amends Chapter 3.24 of the Everett

[1490] European Communities' second written submission, para. 87.
[1491] European Communities' first written submission, para. 151.
[1492] See European Communities' first written submission, paras. 155-157.
[1493] United States' first written submission, para. 514.
[1494] United States' first written submission, para. 514, footnote 680.
[1495] See paras. 7.115-7.120.

Municipal Code, the Chapter that imposes the Everett B&O tax reduction, so that Chapter 3.24.050 provides:

> "B. Upon *every person* engaging within the city in business as a manufacturer; as to such persons the amount of the tax with respect to such business shall be equal to the value of the products, including byproducts, manufactured, multiplied by the rate of one tenth of one percent (.001) *except* as provided as follows:
>
> > 1. For the years beginning January 1, 2006, and ending December 31, 2009, upon every person engaging within the city in business as a manufacturer; as to such persons the amount of the tax with respect to such business shall be equal to the value of the products, including byproducts, manufactured, multiplied by the rate of one tenth of one percent (.001) where such value is up to and including $6,000,000,000 and where such value exceeds $6,000,000,000 the value of such products so exceeding the $6,000,000,000 shall be multiplied by the rate of twenty-five hundredths of one percent (.00025).
> >
> > 2. For the years beginning January 1, 2010, and ending December 31, 2015…"[1496]

7.324 Therefore, on its own terms, the Everett Municipal Code expresses the tax on manufacturers as a general rate, applicable to all manufacturers, subject to an exception.

7.325 Further, the preamble to Ordinance 2759-04 provides:

> "Whereas, the City of Everett agreed the *standard rate* of B&O tax of .001 shall apply to manufacturing receipts up to including $6 billion of receipts …"[1497]

7.326 The MSA, which was agreed between Boeing and the "State of Washington, County of Snohomish, City of Everett and certain other governmental units" also refers to the 0.001 rate of taxation on manufacturers as the "standard rate":

> "Exhibit B-8: City of Everett B&O Tax Rate Reduction
>
> 1. Rate Reduction – *Standard rate* of one-tenth of one percent (.001) on manufacturing gross receipts up to $6 billion, after which the rate will reduce by 75% to .00025
>
> …
>
> Representatives from Boeing and the City of Everett are currently discussing a proposal to reduce City of Everett Business and Occupation taxes assessed on Boeing's aerospace manufacturing activities at its Everett facility. The proposal sets forth an addendum to the City of Everett Municipal Code Chapter 3.24…calling for a rate reduction from the *standard rate* of .001 to .00025 for manufacturing gross receipts greater than $6 billion." [1498]

[1496] See Everett Ordinance 2759-04 (2004), Exhibit EC-61 and Everett Mun. Code ch. 3.24 (2004), Exhibit EC-104 (emphasis added).

[1497] Everett Ordinance 2759-04 (2004), Exhibit EC-61 (emphasis added).

[1498] MSA Exhibit B-8, Exhibits to the MSA, Exhibit EC-59 (emphasis added).

7.327 Therefore, the terminology employed by the City of Everett (and the State of Washington in the MSA) reveals that the rate of 0.001 is the general rate and that the deviations from this are exceptional.

7.328 The fact that there is a time limit associated with the tax reduction also provides support for the notion that the reduction is exceptional rather than establishing a new, permanent standard rate.[1499] Further, unlike the Washington B&O tax regime, which includes up to 40 different rates of taxation, in the City of Everett, apart from the rate applied to manufacturing revenue exceeding $6 billion ($7 billion or $8 billion), a single, uniform rate of 0.001 applies throughout the economy. The Everett Municipal Code includes separate subsections extending the B&O tax to separate business activities, for example, to manufacturing, extracting, wholesaling, printing and publishing. However, the rate applied to each sector is uniform at 0.001, apart from the change introduced by Ordinance 2759-04 for manufacturing income above the relevant threshold.[1500] As a result, an examination of Chapter 3.24 of the Everett Municipal Code reveals that the deviation from 0.001 is indeed exceptional.

7.329 Therefore, we conclude that in the City of Everett there is a "defined normative benchmark" against which to compare the revenue actually raised against the revenue that would be have been raised "otherwise". Given our finding that there is a general rate of B&O taxation on manufacturing income in Everett and that Ordinance 2759-04 introduces an exception to this, a "but for" test can be employed. Application of the test leads to the conclusion that, "but for" the exception introduced by Ordinance 2759-04, the standard rate of 0.001 would apply to all manufacturing revenue.[1501] For these reasons, the Panel finds that there is a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.

7.330 The United States' rebuttal of the argument that the City of Everett is forgoing revenue otherwise due through the B&O tax rate reduction is limited to a single sentence:

> "Since this tax rate reduction applies to all entities engaged in manufacturing in the City, it is not the case that any revenue foregone would have been 'otherwise due'."[1502]

7.331 The United States does not explain on what basis this is conclusive of the issue. Given our finding that there is a general rule of taxation in the City of Everett, the "but for" test is dispositive of the issue. The fact that an exceptional rate of taxation may be widely or even universally available goes to the question of specificity, rather than to the existence of a financial contribution.[1503] Therefore, we dismiss the argument of the United States and find that the City of Everett B&O tax

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[1499] Everett Ordinance 2759-04 (2004), Exhibit EC-61, section 3B.4.

[1500] See Everett Mun. Code ch. 3.24 (2004), Exhibit EC-104.

[1501] The European Communities argues that the law prior to the amendment is the benchmark for the Article 1.1(a)(1)(ii) analysis. In our view, the benchmark is the standard rate as it exists after the amendment to the law is made (i.e. the standard rate in the new, *amended* ordinance). In this case, it makes no difference to the analysis, because the "standard rate" (0.001) does not change as a result of the amendment. However, in some cases the purpose of an amendment may be to create a new standard rate. If the comparison were with the pre-amended law, this would mean that the but for test would *always* be satisfied.

[1502] United States' first written submission, para. 514.

[1503] Although not made explicit, it is possible that the United States' argument arises out of the Appellate Body's statement in *US – FSC* that, where it is difficult to identify a general rule of taxation in the Member State in question, a comparison of the fiscal treatment of legitimately comparable income should be made to determine whether revenue "otherwise due" has been forgone. The United States may be suggesting that, since the tax reduction is theoretically available to all manufacturing entities, legitimately comparable income, namely manufacturing revenue, is receiving the same fiscal treatment. However, in this case, given the existence of a "defined normative benchmark" in the City of Everett B&O tax system, it is appropriate to apply the "but for" test rather than the "legitimately comparable income" test. In fact, to apply the "legitimately comparable income" test in these circumstances would result in conflating the financial contribution and the specificity analysis.

reduction constitutes the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement.

7.332 Given our finding that the City of Everett B&O tax reduction constitutes a financial contribution in the form of the foregoing of revenue otherwise due, the Panel finds that a benefit is thereby conferred. The tax reduction is essentially a gift from the government, or a waiver of obligations due, and it is clear that the market does not give such gifts. The tax reduction provides advantages on non-market terms and therefore confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[1504]

7.333 For these reasons, the Panel finds that the City of Everett B&O tax reduction is a subsidy within the meaning of Article 1 of the SCM Agreement.

(iv) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

Arguments of the European Communities

7.334 The European Communities submits that the City of Everett B&O tax reduction is *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement.[1505] Ordinance 2759-04 states that its purpose is to benefit Boeing.[1506] Further, the tax reduction is limited to manufacturers with output worth at least $6 billion per year. Apart from Boeing, no other manufacturer in Everett comes close to manufacturing products with such a value.[1507] As a result, the European Communities concludes that the tax rate reduction is limited explicitly to "an enterprise", namely Boeing. The European Communities also argues that the reduction is limited to a "group of enterprises", namely those enterprises manufacturing products in Everett worth over $6 billion annually.[1508]

7.335 In the alternative, the European Communities contends that the tax rate reduction is de facto specific under Article 2.1(c) of the SCM Agreement. This is because Boeing is the only company that qualifies for it, as no other manufacturer produces goods with the required annual value.[1509] After Boeing, the next largest manufacturer produces goods to the value of just over $1 billion per year.[1510] Further, the MSA and Ordinance 2759-04 state that the tax reduction is intended to benefit production of the 787. In addition, Chapter 3.24.055 of the Everett Municipal Code incorporates section 1 of the Ordinance with the heading "Findings and purpose – Boeing business and occupation tax reduction".[1511] As a result, the European Communities argues that the tax reduction is limited to "an enterprise" (Boeing) or to a group of enterprises (those that make products in Everett worth over $6 billion annually – which is only Boeing).[1512] Further, the European Communities submits that the United States does not address its argument that the subsidy is de facto specific and therefore the United States implicitly concedes this.[1513]

7.336 The European Communities rejects the United States' argument that Ordinance 2759-04 contains objective criteria that render it non-specific under Article 2.1(b). The "objective criteria or conditions" referred to in Article 2.1(b) must be "neutral" and must "not favour certain enterprises

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[1504] See also paras. 7.168-7.171 of this Report.
[1505] European Communities' first written submission, para. 159.
[1506] European Communities' first written submission, para. 159.
[1507] European Communities' first written submission, para. 159.
[1508] Summary of the European Communities' Specificity Arguments, Exhibit EC-1286.
[1509] European Communities' first written submission, para. 161.
[1510] European Communities' first written submission, para. 159.
[1511] European Communities' first written submission, para. 161.
[1512] Summary of the European Communities' Specificity Arguments, Exhibit EC-1286.
[1513] European Communities' second written submission, para. 94 and European Communities' comments on United States' response to question 233, para. 321.

over others". This is not the case for the City of Everett tax rate reduction, because the condition to access the subsidy is such that only one corporation can satisfy it.[1514] The European Communities also disagrees with the suggestion from the United States that an analysis under Article 2.1(c) is not necessary if a measure falls within Article 2.1(b) of the SCM Agreement. The text of Article 2.1(c) provides that a panel may make a finding of specificity, "notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b)".[1515]

Arguments of the United States

7.337 The United States argues that although Ordinance 2759-04 mentions Boeing as a beneficiary of the tax reduction, the Ordinance is not specific under Article 2.1(a) of the SCM Agreement because it is in no way limited to Boeing. Rather, the Ordinance applies to "every person engaging within the city in business as a manufacturer". It is a neutrally worded tax measure with broad applicability to other large businesses.[1516]

7.338 The United States also submits that Ordinance 2759-04 contains objective criteria that render it non-specific under Article 2.1(b) of the SCM Agreement.[1517] According to the United States, "objective" conditions are those that are observable and capable of being evaluated and applied without subjective judgment.[1518] The conditions associated with the City of Everett tax reductions meet this definition because the tax reductions apply to "every person engaging within the city in business as a manufacturer" when certain monetary values for the manufactured products are met.[1519] At one point, the United States seems to suggest that once a subsidy is found to fall within Article 2.1(b), it is non-actionable:

> "Pursuant to Article 2.1(b), a subsidy may be found to be *de jure* non-specific and therefore not an actionable subsidy under the SCM Agreement".[1520]

7.339 However, in answer to Panel questioning, the United States acknowledges that a subsidy found *de jure* non-specific under Article 2.1(b) may be found to be de facto specific under Article 2.1(c) of the SCM Agreement.[1521]

7.340 In response to a Panel question regarding whether the United States concedes that the City of Everett B&O tax reductions are de facto specific, the United States responds: "the primary argument of the United States with respect to the City of Everett B&O tax reduction is that it does not confer a subsidy".[1522]

Evaluation by the Panel

7.341 In our view, the City of Everett B&O tax reduction is a clear case of a de facto specific subsidy. Article 2.1(c) of the SCM Agreement provides:

> "If, notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b), there are reasons to believe that the subsidy may in fact be specific, other factors may be considered. Such

[1514] European Communities' second written submission, para. 96.
[1515] European Communities' comments on United States' response to question 49, para. 179.
[1516] United States' first written submission, para. 515.
[1517] United States' first written submission, para. 516.
[1518] United States' response to question 49, para. 139.
[1519] United States' first written submission, para. 516.
[1520] United States' response to question 49, para. 137.
[1521] United States' response to question 145, para. 128.
[1522] United States' response to question 233, para. 387.

> factors are: use of a subsidy programme by a limited number of certain enterprises, predominant use by certain enterprises, the granting of disproportionately large amounts of subsidy to certain enterprises, and the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy."

7.342 The "value of the products manufactured", which provides the threshold for the tax reduction, is determined by the gross proceeds of sale derived from the manufactured products.[1523] The European Communities submits an exhibit that lists "Top Everett Manufacturers" by sales revenue.[1524] After Boeing, the company with the next largest sales revenue is UNOVA, which in 2005 generated $1.12 billion in revenue. All of the other manufacturers in Everett generated less than one billion dollars.[1525] Further, the United States does not contest the European Communities' assertion that only Boeing meets the threshold required to benefit from the tax reduction. On the basis of this evidence, we conclude that only Boeing uses the subsidy programme.

7.343 This is perhaps not a coincidence given that the language in the preamble to Ordinance 2759-04 and in Section 3.24.055 of the City of Everett Municipal Code indicates that the reduction was enacted with Boeing in mind. Section 3.24.055 essentially repeats the preamble and provides:

> "3.24.055 Findings and purpose – Boeing business and occupation tax reduction
>
> The City of Everett, the State of Washington, the Port of Everett and the Boeing Company on December 19, 2003, entered into 'Project Olympus Master Site Development and Location Agreement' concerning the location in the City of Everett the facility for the manufacturing of the aircraft commonly referred to as the 7E7. The purpose of said agreement was to assist the Boeing Company in obtaining a suitable site including buildings, related facilities, infrastructure and other improvement for the location of the final assembly of the 7E7 aircraft and other operations related thereto. As a result of diligent good faith negotiations the City of Everett and the Boeing Company have agreed on a business and occupation tax reduction to be permanent for the calendar years 2006 through 2023. During such period the City of Everett agrees not to suspend, revoke or require repayment of such reduction as authorized by its business and occupation tax reduction; provided the final assembly of the 7E7 aircraft begins by December 31, 2007. The rate reduction by the City of Everett is intended by the parties to create an estimated net present value reduction of approximately thirty-five million dollars, which amount is calculated using a six percent discount rate over a twenty-year period beginning in 2004 and based on current estimated aircraft production and sales." [1526]

[1523] European Communities' first written submission, para. 145, footnote 228.

[1524] E-mail from Charli McGourty, Administrative Assistant, City of Everett Mayor's Office, 5 May 2005, and attached spreadsheets of top Everett manufacturers as compiled by the City of Everett Mayor's Office, Exhibit EC-106.

[1525] One of the lists in E-mail from Charli McGourty, Administrative Assistant, City of Everett Mayor's Office, 5 May 2005, and attached spreadsheets of top Everett manufacturers as compiled by the City of Everett Mayor's Office, Exhibit EC-106, states that Fluke Corp has sales revenue of $100-500 million, while the next list states that it has corporation-wide revenue of $4.57 billion. We assume that the discrepancy arises because the corporation-wide revenue is not all taxable in the City of Everett and that the figure to rely on for the purposes of eligibility for the tax reduction is $100-$500 million. In any event, even if Fluke Corp. does generate sales revenue of $4.57 billion taxable within the City of Everett, this does not affect our analysis, because the fact remains that only Boeing meets the threshold to be eligible for the tax reduction.

[1526] See Everett Mun. Code ch. 3.24 (2004), Exhibit EC-104.

7.344 Therefore, we find that the City of Everett B&O tax reduction is de facto specific under Article 2.1(c) of the SCM Agreement on the basis that the subsidy programme is "used by a limited number of certain enterprises", namely Boeing.

7.345 The submissions of the parties regarding whether the City of Everett B&O tax reduction is *de jure* specific under Article 2.1(a) of the SCM Agreement, on the basis that it is limited to a group of enterprises, namely those enterprises making products in Everett worth over $6 billion per year, raise several questions regarding the relationship between Articles 2.1(a) and 2.1(b) of the SCM Agreement and the interpretation of "objective criteria or conditions" under Article 2.1(b). However, in our view, for the reasons outlined in the preceding paragraphs, the City of Everett B&O tax reduction is clearly de facto specific and therefore we find it unnecessary to resolve the question of whether it is also *de jure* specific.

7.346 For these reasons, the Panel finds that the City of Everett B&O tax reduction is a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement.

(v) The amount of the subsidy to Boeing's LCA division

Arguments of the European Communities

7.347 The European Communities submits that the amount of the tax reduction to Boeing's LCA division is $67.5 million over the period 2006-2023.[1527] The European Communities derives this figure from Ordinance 2759-04, which states that the net present value of the reduction is approximately $35 million over the life of the measure. Specifically, the Ordinance provides:

> "The rate reduction by the City of Everett is intended by the parties to create an estimated net present value reduction of approximately thirty-five million dollars ($35,000,000.00), which amount is calculated using a six percent (6%) discount rate over a twenty (20) year period beginning 2004 and based on current estimated aircraft production and sales." [1528]

7.348 To arrive at the figure of $67.5 million, the European Communities assumes that the value of the tax reduction in real terms should be allocated evenly over the period 2006-2023. The European Communities then calculates the nominal value of the tax reduction using the 6 per cent discount rate cited in Ordinance 2759-04. This results in a total amount for the subsidy of $67.5 million.[1529] Although the European Communities argues that this is likely to be an underestimate of the value of the subsidy, given that Boeing's forecast for LCA deliveries has increased substantially since 2004, it accepts $67.5 million as the appropriate amount to attribute to the tax reduction to Boeing's LCA division.[1530]

7.349 In response to a Panel question, the European Communities agrees that it may not be necessary for the Panel to arrive at a total dollar value for the subsidy, given that the tax reduction is calculated on an *ad valorem* basis.[1531] However, the European Communities argues that this leads to "certain complications" in the case of the City of Everett B&O tax reduction because the reduction applies only once the value of goods sold has exceeded certain thresholds.[1532] In any event, the

[1527] European Communities' first written submission, para. 152.
[1528] European Communities' first written submission, para. 152 and Everett Ordinance 2759-04 (2004), Exhibit EC-61.
[1529] European Communities' first written submission, para. 153.
[1530] European Communities' first written submission, para. 152.
[1531] European Communities' response to question 229, para. 427.
[1532] European Communities' response to question 229, para. 430.

BCI deleted, as indicated **[***]**

European Communities notes that whether the Panel assesses the subsidies using a total dollar amount or on an *ad valorem* basis, the resulting per-aircraft subsidization figures remain substantially the same.[1533]

Arguments of the United States

7.350 The United States' position is that only revenue that has actually been foregone in the past should be included in calculating the amount of the tax reduction.[1534] Therefore, only the benefit to Boeing in 2006 and 2007 should be quantified, resulting in an amount for the tax reduction of $5.5 million.[1535] Further, the United States agrees that it is not necessary for the Panel to arrive at a precise dollar value for the tax reduction. This is because the reduction is calculated on an *ad valorem* basis and as a result any subsidization rate remains constant regardless of the absolute levels of Boeing's sales volumes and prices.[1536]

Evaluation by the Panel

7.351 For the same reasons as expressed in relation to the Washington HB 2294 taxation measures, we quantify the amount of the City of Everett B&O tax reduction up until 2006.[1537]

7.352 Given that the City of Everett B&O tax reduction is calculated on an *ad valorem* basis, once the threshold for receipt of the tax reduction has been reached, the subsidization rate on a per-aircraft basis remains constant irrespective of the sales and deliveries that take place in the relevant period. The subsidization rate until the end of 2006 is 0.075 per cent of gross proceeds of sale for sales above $6 billion.

7.353 In relation to the dollar value of the benefit of the City of Everett B&O tax reduction to Boeing's LCA division, the European Communities' calculation of a nominal annual value for the tax reduction is based on the best information available, namely the figure and the discount rate in Ordinance 2759-04. We note that the United States does not object to the use of these figures and does not object to the method employed by the European Communities to convert the lump sum figure, which is expressed in real terms, into annual nominal amounts. Relying on these figures, the Panel finds that the amount of the City of Everett B&O tax reduction received by Boeing's LCA division through 2006 is $2.2 million.

(vi) Conclusion

7.354 **For these reasons, the Panel finds that the local tax reduction introduced by the City of Everett is a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement. The Panel estimates that the amount of the subsidy to Boeing's LCA division through 2006 is $2.2 million.**

[1533] European Communities' response to question 229, para. 428.

[1534] United States' first written submission, footnote 690.

[1535] United States' first written submission, footnote 690. The United States indicates that in calculating the value of the tax reduction for 2006-2007 it relies on State and Local Subsidies to Boeing LCA Division, Exhibit EC-27. This reveals that the United States implicitly accepts the method the European Communities has used in allocating the $35 million figure over time and in converting it into nominal terms. We note that there appears to be a clerical error in the United States' submissions. The United States reports that the value of the tax reduction for 2006 and 2007, as reported in State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, is $5.5 million. However, an examination of Exhibit EC-27 indicates that the amount in these two years is in fact $4.5 million ($2.2 million in 2006 and $2.3 million in 2007).

[1536] United States' response to question 229, para. 374.

[1537] See para. 7.252.

BCI deleted, as indicated **[***]**

(c) Project Olympus Master Site Agreement subsidies pursuant to "The Boeing Incentive Package"

(i) Introduction

7.355 The MSA was concluded on 19 December 2003. Article 1.2 of the MSA provides:

> "This Agreement is intended to legally bind the parties, subject only to the granting, adoption or enactment of the respective resolutions, ordinances, legislative amendments and similar authorizations that may be required to provide any Commitments. This Agreement sets forth the terms and conditions under which Boeing intends to locate the Facilities and operations related to Project Olympus in the State and the covenants, representations and warranties in connection therewith."[1538]

7.356 "Project Olympus" means "a fully operational state-of-the art facility for, initially, the assembly of the 7E7 Aircraft, together with all related utilities and transportation improvements and facilities necessary and appurtenant thereto to be located on or connected to the Facilities Site, including any off-site improvements and facilities".[1539] Article 1.3 of the MSA provides that "{i}n consideration of Boeing locating the Facilities and operations related to Project Olympus at the Facilities Site, the Public parties shall fully perform at all times their individual Commitments set forth in this Agreement".[1540] The MSA contains specific provisions with respect to: the facilitation of Project Olympus[1541]; bonds, grants, credits, abatements, exemptions and related matters[1542]; facilities site[1543]; site suitability and development[1544]; job training and other employment matters[1545]; 747-400 large cargo freighter programme[1546]; Boeing suppliers[1547]; representations, warranties, covenants and acknowledgements[1548]; and indemnification and remedies.[1549]

7.357 The European Communities argues that eight measures referred to in the MSA constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. These measures are: (i) specific road improvements for the benefit of Boeing's LCA production facilities in Everett; (ii) the waiver of landing fees for Boeing's 747 Large Cargo Freighters ("the 747 LCF") at Paine Field to lower the costs of transporting 787 components to Everett; (iii) improvements to rail-barge transfer capabilities and expansion of the South Terminal facility to facilitate the transportation of 787 components to Everett; (iv) the freezing of rates for water, sanitary sewer, solid waste, and process wastewater services utilized by Boeing's LCA production facilities in Everett; (v) the provision of coordinators to Boeing to help start up Project Olympus; (vi) the creation of a workforce development programme and the provision of an Employment Resource Center to train Boeing's employees who will work on the assembly of the 787; (vii) the extension to 747 LCFs of tax and other incentives provided to the 787; and (viii) the assumption of litigation costs that Boeing may incur in relation to

[1538] MSA, Art. 1.2, Exhibit EC-58.
[1539] MSA, Art.2.1, Exhibit EC-58.
[1540] MSA, Art. 1.3.1, Exhibit EC-58.
[1541] MSA, Art. III, Exhibit EC-58.
[1542] MSA, Art. IV, Exhibit EC-58.
[1543] MSA, Art. V, Exhibit EC-58.
[1544] MSA, Art. VI, Exhibit EC-58.
[1545] MSA, Art. VII, Exhibit EC-58.
[1546] MSA, Art. VIII, Exhibit EC-58.
[1547] MSA, Art. IX, Exhibit EC-58.
[1548] MSA, Art. X, Exhibit EC-58.
[1549] MSA, Art. XI, Exhibit EC-58.

the MSA.[1550] The European Communities contends that the total amount of the subsidies to Boeing's LCA division resulting from these eight measures over the period 2004-2024 is $463.3 million.[1551]

7.358 The United States argues that none of the eight measures challenged by the European Communities are actionable subsidies under the SCM Agreement and that each claim of the European Communities fails under one or more of the requirements of the SCM Agreement for a potentially actionable subsidy – (i) a financial contribution, (ii) that confers a benefit, and (iii) is specific.

7.359 The Panel first examines the infrastructure-related measures challenged by the European Communities, which account for some eighty per cent of the total amount of the subsidies allegedly provided pursuant to the MSA.[1552]

(ii) Road improvements around Boeing's Everett facility, construction of a rail barge transfer facility and expansion of South Terminal by the Port of Everett

Introduction

7.360 The European Communities argues that: (i) road improvement projects around Boeing's Everett facility and (ii) the construction of a rail-barge transfer facility and the expansion of the South Terminal facility by the Port of Everett, constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. The European Communities estimates that the amount of the subsidy to Boeing's LCA division from the road improvement projects is $291.2 million over the period 2004-2024, that the amount of the subsidy to Boeing's LCA division resulting from the construction of the rail-barge transfer facility is $16.0 million over the period 2004-2024, and that the amount of the subsidy to Boeing's LCA division resulting from the expansion of the South Terminal is $34 million over the period 2004-2024.[1553]

7.361 The United States argues that the measures challenged by the European Communities are not subsidies within the meaning of Article 1 of the SCM Agreement because they constitute general infrastructure.

The measures at issue

Road Improvements for Boeing's Everett Facility – I-5 and SR 527 Expansion Projects

7.362 The European Communities challenges what it refers to as "road improvements for Boeing's Everett facility"[1554], which it alleges were specifically designed to "(1) alleviate traffic congestion around Boeing's Everett plant; (2) allow Boeing to accommodate additional heavy-duty truck traffic; and (3) provide sufficient road capacity to handle a substantial increase in employment at the Boeing facility".[1555] The measures at issue are two road improvement projects undertaken by the State of Washington and the City of Everett in the vicinity of Boeing's facilities in Everett. The first project ("I-5 expansion project") involved the widening of freeway lanes and extending High Occupancy

[1550] European Communities' first written submission, paras. 91-92 and 163-164.
[1551] State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, p. 2.
[1552] The amount of the alleged infrastructure-related subsidies (i.e. the road and port improvements, 747 LCF landing fee waivers, and utility rate freezes) over the period 2004-2024 is $370.80 million. State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, p. 2.
[1553] State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, p. 2.
[1554] European Communities' first written submission, p. 88. The European Communities also refers to these measures as the "787 Road Improvement Package". European Communities' first written submission, para. 210.
[1555] European Communities' first written submission, para. 213.

Vehicle ("HOV") lanes on Interstate 5 ("I-5") between State Route ("SR") 526[1556] and U.S. Highway 2.[1557] The second project ("SR 527 expansion project") involved the addition of another lane in each direction on SR 527 in the stretch of highway from 112th Street NE in the north to 132nd Street NE in the South.[1558]

7.363 Article 6.11.1 of the MSA provides:[1559]

> "6.11 **Road Access**
>
> 6.11.1 DOT and the City each acknowledge that they have been provided with detailed information regarding Boeing's roadway access requirements as set forth on Exhibit C-9. DOT and the City each represent and warrant that they own and maintain certain public roadways which provide access to or are in proximity to the Facilities Site and which are described with more particularity in Exhibit C-9. DOT and the City each shall undertake and complete all design and construction of all road and road and traffic control-related improvements set forth in Exhibit C-9 pursuant to the terms, conditions and schedule set forth therein. Such improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing prior to DOT and the City each seeking of bids or proposals, or letting of contracts, for the construction thereof. All road access improvements shall be designed and constructed in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic meeting the requirements that Boeing has provided to DOT and the City. After the completion of construction of the road access improvements, such improvements shall be owned by, maintained, repaired and replaced, as necessary by DOT and the City. All design and construction work to be performed by or on behalf of DOT and the City shall be accorded the highest priority. DOT and the City shall, upon making a determination that such action is in the public interest, promptly after the Effective Date, acquire all such easements and property interests as may be necessary to provide for the road access improvements for the Facilities Site as set forth herein and in Exhibit C-9. The sources of funding for such road access improvements are set forth in Exhibit C-9. Each of DOT and the City shall pay all costs, fees and expenses in connection with or arising out of all obligations and Commitments set forth in this Section 6.11. DOT and the City each represent and warrant that the road access that currently serves, or will serve upon substantial completion of the road access improvements required under this Section 6.11. The Facilities Site shall be sufficient to meet road access requirements for the needs of

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[1556] The European Communities notes that SR 526 "is commonly known as the Boeing Freeway". European Communities' first written submission, para. 214, footnote 317. The United States contends that "{t}his name is correct, but it merely refers to the Boeing plant's status as an easily identifiable landmark on SR 526. SR 526 is, in fact, a public road that is used by thousands of local residents, business, and tourists". United States' first written submission, para. 522, footnote 696.

[1557] United States' first written submission, para. 522; European Communities' first written submission, para. 215; WSDOT Projects: I-5 – Everett, SR 526 to US 2 HOV Lanes, Exhibit EC-118; Washington State Department of Transportation, "Nickel Funding Package" Enacted for Transportation by the 2003 State Legislature, p. 15, Exhibit EC-123.

[1558] United States' first written submission, para. 523; European Communities' first written submission, para. 215; Washington State Department of Transportation, "Nickel Funding Package" Enacted for Transportation by the 2003 State Legislature, p. 17, Exhibit EC-123. WSDOT Projects: MAP SR 527 Widening 132 St. SE to 112 St. SE, Exhibit US- 206; SR 527 -132 St. SE to 112 St. SE, Exhibit US-207; SR 527 Route Development Plan, Exhibit US-208.

[1559] "DOT" means the Washington State Department of Transportation. "City" means City of Everett, Washington. MSA, Art. 2.1, Exhibit EC-58.

BCI deleted, as indicated **[***]**

> Boeing and its Suppliers to provide sufficient capacity for employment levels up to 83,000 through 2030.
>
> 6.11.2 The City and DOT shall do all things and take all actions necessary to obtain funding for and construction of any new arterial roadways, including any utilities necessary to facilitate future development, as set forth in Exhibit C-9."

7.364 Most of the funding for the I-5 and SR 527 expansion projects was provided by an appropriations bill passed by the Washington State legislature in 2003. This bill established a $3.9 billion "Nickel Funding Package" to finance 158 infrastructure projects.[1560] The European Communities emphasizes that it "is challenging only the $291.2 million allocated for the infrastructure improvements that are part of the Master Site Agreement obligations undertaken by the State and the City, and not the entire $3.9 billion transportation improvement package".[1561]

7.365 The I-5 expansion project was expected to be completed by June 2008. The SR 527 expansion project was completed in May 2006.[1562]

> Port of Everett – Improvement of Rail-Barge Transfer Capabilities and Expansion of South Terminal Facility

7.366 The European Communities challenges the construction of a new rail-barge transfer facility and the expansion of the South Terminal facility by the Port of Everett. Regarding the rail-barge transfer facility, the European Communities alleges that this "new facility will make it easier for Boeing to accept delivery of oversized containers holding 787 parts, and transport them to its 787 assembly facility".[1563] Regarding the expansion of the South Terminal, the European Communities contends that "{t}his expansion will allow the South Terminal to directly accept ships carrying oversized containers of 787 parts from Japan".[1564]

7.367 Article 6.12 of the MSA provides:[1565]

> "6.12 **Rail**
>
> 6.12.1 The Port of Everett acknowledges that it has been provided with detailed information regarding Boeing's rail and rail access requirements as set forth in Exhibit C-10. The Port of Everett represents and warrants that BNSF owns, operates and maintains certain railroad rights of way and track which are in proximity to the Facilities Site and which are described with more particularity in Exhibit C-10. The Port of Everett shall undertake the design and construction of all rail and rail-related improvements as described on Exhibit C-10 pursuant to the terms, conditions and schedule set forth therein. Such improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing prior to the earlier of the Port of Everett seeking of bids or proposals, or the letting of contracts, for the construction thereof. All rail improvements shall be designed and constructed in accordance with the Standards of the American Railway Engineering Association. After the completion of construction of the rail improvements, such improvements

[1560] ESHB 1163, 58th Leg., 2003 Reg. Sess. (Wash. 2003), Exhibit EC-121.
[1561] European Communities' first written submission, para. 211.
[1562] European Communities' first written submission, paras. 223-224.
[1563] European Communities' first written submission, para. 253.
[1564] European Communities' first written submission, para. 255.
[1565] "Port of Everett" means the Port of Everett, a municipal corporation of the State of Washington. "BNSF" means Burlington Northern Santa Fe Corporation, a Delaware corporation. MSA, Art. 2.1, Exhibit EC-58.

shall be owned and operated by BNSF and maintained, repaired and replaced, as necessary by BNSF. The Port of Everett shall, upon making a determination that such action is in the public interest, promptly after the Effective Date, acquire, or facilitate discussions for the acquisition by BNSF of all such easements and property interests as may be necessary to provide for the rail service to the Facilities Site set forth herein and in Exhibit C-10. All design and construction work to be performed by or on behalf of the Port of Everett shall be accorded the highest priority. The sources of funding for such rail improvements are set forth in Exhibit C-10. The Port of Everett shall pay all costs, fees and expenses in connection with or arising out of all obligations and Commitments set forth in this Section 6.12. The Port of Everett represents and warrants that the rail system that currently serves the Facilities Site is sufficient to meet all of Boeing's rail system requirements for Project Olympus upon substantial completion of the rail system improvements required under this Section 6.12.

6.12.2 The Port of Everett shall consult regularly with Boeing on the design, development and construction of the rail to dock facility as set forth in Exhibit C-10."

7.368 Article 6.13 of the MSA provides:

"6.13 **Dock and Port**

6.13.1 The Port of Everett acknowledges that it has been provided with detailed information regarding Boeing's dock and port requirements as set forth in Exhibit C-11. The Port of Everett represents and warrants that its {sic} owns, operates and maintains those dock and port facilities which are in proximity to the Facilities Site and which are described with more particularity in Exhibit C-11. The Port of Everett shall undertake and complete the design and construction of all dock and port and all dock and port-related improvements as described on Exhibit C-11 pursuant to the terms, conditions and schedule set forth therein. Such improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing prior to the earlier of the Port of Everett's seeking of bids or proposals, or letting of contracts, for the construction thereof. All dock and port improvements shall be designed and constructed in accordance with all applicable standards. After the completion of construction of the dock and port improvements, the dock, port and such improvements shall be owned, operated, maintained, repaired and replaced, as necessary, by the Port of Everett. All design and construction work to be performed by or on behalf of the Port of Everett shall be accorded the highest priority. The Port of Everett shall, upon making a determination that such action is in the public interest, promptly after the Effective Date, acquire all such easements and property interests as may be necessary to provide for the dock and port improvements as set forth herein and in Exhibit C-11. The sources of funding for such dock and port improvements are set forth in Exhibit C-11. The Port of Everett shall pay all costs, fees and expenses in connection with or arising out of all obligations and Commitments set forth in this Section 6.13. The Port of Everett represents and warrants that the port and dock system that currently serves, or will serve, the Facilities Site shall be sufficient to meet all of Boeing's port and dock system requirements for project Olympus upon substantial completion of the port and dock system improvements required under this Section 6.13.

6.13.2 The Port of Everett shall enter into an agreement with Boeing pursuant to which: (a) port access will be available on a guaranteed and first priority basis to Boeing pursuant to an agreement to be entered into between the Port of Everett and

> the carrier nominated by Boeing; and (b) in the event that space is unavailable at any time for Boeing at berth having direct rail access, the Port of Everett shall make access to a berth available to Boeing at the Port of Everett having truck access or efficient truck-to-rail access.
>
> 6.13.3 The Port of Everett shall consult regularly with Boeing on the design, development and construction of the South Terminal facility as set forth in Exhibit C 11."

7.369 The Port of Everett broke ground on the rail-barge transfer facility in August 2005[1566] and as of mid-2006 it was nearing completion.[1567] The European Communities contends that construction of the expanded South Terminal facility was expected to begin in mid-2007, with completion between 2009-2011.[1568] The United States contends that the expansion of the South Terminal facility has not occurred.[1569]

Arguments of the European Communities

7.370 The primary argument advanced by the European Communities as to why the I-5 and SR 527 expansion projects, the construction of the rail-barge transfer facility and the expansion of the South Terminal facility constitute financial contributions in the sense of Article 1.1(a)(1) of the SCM Agreement is that they involve a provision of goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii).[1570] Alternatively, the European Communities submits that each of these measures involves a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i).[1571]

7.371 The European Communities argues that the road improvement measures, referred to in Article 6.11 and Exhibit C-9 of the MSA, and the Port of Everett improvement measures, referred to in Articles 6.12-6.13 and Exhibits C-10 and C-11 of the MSA, constitute financial contributions within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement in the form of provisions of infrastructure that is not general.[1572] The European Communities challenges the infrastructure *improvement* projects rather than the provision of the underlying infrastructure itself.[1573]

7.372 The European Communities submits that infrastructure cannot be general within the meaning of Article 1.1(a)(1)(iii) if pertinent facts, or the "totality of facts and circumstances" suggest that the infrastructure is "partial" or "particular" in some way.[1574] Use or access by the public at large does not suffice to conclude that infrastructure is general. Rather, the totality of facts and circumstances surrounding the provision of infrastructure by a government must be examined to determine whether that infrastructure is general or non-general.[1575] The European Communities submits that an interpretation of "general infrastructure" based on the ordinary meaning of the terms, the object and purpose of the SCM Agreement, and the negotiating history of the SCM Agreement supports its view that whether infrastructure is available for use by the general public is not decisive.

[1566] European Communities' first written submission, para. 254.
[1567] European Communities' first written submission, para. 254.
[1568] European Communities' first written submission, para. 257.
[1569] United States' first written submission, para. 549.
[1570] European Communities' first written submission, paras. 225-227 and 258.
[1571] European Communities' first written submission, paras. 228 and 258.
[1572] European Communities' first written submission, paras. 225-227 and 258.
[1573] European Communities' response to question 36, paras. 117-121.
[1574] European Communities' second written submission, para. 131.
[1575] European Communities' second written submission, paras. 132-133.

7.373 The European Communities argues that the fact that the SCM Agreement does not provide any textual clarification, specification, or explanation of the phrase "general infrastructure" demonstrates that Members did not intend to make a particular factual circumstance, or a particular set of circumstances, determinative and that it was the intention of Members that "general infrastructure" be interpreted in such a manner as to take account of diverse factual circumstances.[1576] Thus, the interpretation of the meaning of "general infrastructure" in Article 1.1(a)(1)(iii) must be based on the rules of treaty interpretation laid down in the Vienna Convention. The ordinary meaning of the word "general" is "{i}ncluding, involving, or affecting all or nearly all the parts of a specified or implied whole...; completely or nearly universal; not partial, particular, local, or sectional".[1577] In the light of this ordinary meaning of "general", the European Communities asserts that while use or access by all or nearly all of the public should certainly be a relevant consideration, "infrastructure that is somehow partial or particular by means of other facts and circumstances would necessarily be non-general".[1578] Infrastructure that is intended to alter the competitive position of firms is not general within the ordinary meaning of the term "general" because it enhances the competitive position of one firm vis-à-vis other firms and is thereby "partial" to that firm in that it favours that firm over others.[1579]

7.374 The European Communities submits that a consideration of the object and purpose of the SCM Agreement sheds further light on the meaning of the phrase "general infrastructure". The reason for the exclusion of general infrastructure from the WTO disciplines is that while the SCM Agreement provides disciplines regarding the grant of subsidies to specific economic operators, it does not interfere with the legitimate government choices to pursue public policies for the benefit of the population as a whole.[1580] Interpreted in the light of object and purpose of the SCM Agreement, the phrase "general infrastructure" covers infrastructure measures for the public interest i.e. infrastructure measures designed to benefit the public as a whole rather than a particular company or group of companies.[1581]

7.375 The European Communities argues that the drafting history of the SCM Agreement lends further support to the view that use or access by the public at large is not a determining factor in considering whether infrastructure is general. In this regard, it refers to a paper which it submitted to the Uruguay Round Negotiating Group on Subsidies and Countervailing Measures[1582] as support for the proposition that the exclusion of general infrastructure from the scope of Article 1.1(a)(1)(iii) does not apply to improvements to infrastructure that have the potential to alter the competitive positions of firms, even if that infrastructure may be useable or accessible to the public.[1583]

7.376 The European Communities considers that whether infrastructure is general for the purposes of Article 1.1(a)(1)(iii) of the SCM Agreement is a question distinct from whether a subsidy is specific for the purposes of Article 2. In order to be excluded from the scope of application of the

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[1576] European Communities' second written submission, paras. 134-135.

[1577] European Communities' first written submission, para. 226, referring to the *New Shorter Oxford English Dictionary* 1073 (4th ed. 1993); European Communities' second written submission, para. 136.

[1578] European Communities' second written submission, para. 136.

[1579] European Communities' response to question 129, para. 92.

[1580] European Communities' second written submission, para. 137. The European Communities asserts that this is also reflected in the preamble to the WTO Agreement, according to which Members recognize that "their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living".

[1581] European Communities' response to question 129, paras. 93, 97; European Communities' comments on United States' response to question 128, para. 173 ("The critical inquiry in considering whether infrastructure is 'general' is whether the infrastructure serves the *public interest* or *the interest of a particular company or group of companies*." (italics original).)

[1582] Submission by the European Community, 27 November 1989, MTN.GNG/NG10/W/31, p. 6.

[1583] European Communities' second written submission, para. 138.

SCM Agreement, it should be clear and unambiguous that the measure at issue relates to infrastructure that is not "partial" or "particular" in some way. Such a determination should be a straightforward factual exercise. If, on the other hand, there are facts suggesting that the infrastructure might be particular in some way, the measure should not be excluded from the scope of application of the SCM Agreement in the initial financial contribution analysis.[1584]

7.377 The European Communities argues that the dictionary definitions cited by the United States do not support the conclusion drawn by the United States that "infrastructure is general if the infrastructure is universally available to all or nearly all inhabitants or users of the relevant area". The United States' single-pronged approach not only is without any foundation in the SCM Agreement but also would allow Members to subvert the object and purpose of the SCM Agreement. Article 1.1(a)(1)(iii) of the SCM Agreement uses the word "general", and not the words "accessible" or "available". Because the word "general" relates to more than just accessibility or availability, the determination of whether infrastructure is general should be based on an examination of the totality of the facts and circumstances pertinent to the infrastructure (or infrastructure improvement) at issue.[1585]

7.378 As to why the I-5 and SR 527 expansion projects do not constitute a provision of general infrastructure, the European Communities contends that the measures were "part of a tailor-made package for Boeing to improve transportation infrastructure only in the vicinity of the Boeing facility at Everett".[1586] The measures were designed to alleviate traffic congestion around the Boeing Everett plant, to accommodate additional heavy-duty truck traffic into and round the Boeing Everett plant, and to increase employment capacity at the Boeing Everett plant. The work on the projects at issue coincided with the start-up of the 787 programme, and the Washington State Legislature had rejected previous efforts to improve the same roads. The European Communities also asserts that the road improvement projects were the result of negotiations between Boeing and the State of Washington before Boeing agreed to site its 787 facility in Everett and were thus a pre-condition for Boeing's agreement to site its facility in Everett.[1587]

7.379 The European Communities rejects the argument of the United States that the road improvement projects at issue were necessary because of problems of traffic congestion on I-5 and SR 527. The points made by the United States regarding pre-existing traffic and congestion levels on I-5 and SR 527 are immaterial as Boeing obtained the road improvements in anticipation of future increases in Boeing's employment level.[1588] Regarding the I-5 expansion project, the European Communities argues that the reliability of the data on traffic volumes presented by the United States is questionable and that because Boeing's Everett facility operates seven days a week, the congestion on I-5 is a result of Boeing's operations.[1589] With regard to SR 527, the European Communities argues that the anticipated increase in traffic volume is attributable to Boeing's operations at Everett. The European Communities notes, in this regard, that the MSA guaranteed the SR 527 project to ensure that the roads around SR 526[1590] could accommodate significant 787-related employment level increases.[1591]

7.380 In summarizing its position on why the I-5 and SR 527 expansion projects cannot be considered to be a provision of general infrastructure, the European Communities argues that: (i) Boeing has a legal right to define the specifications of the publicly-financed road improvements,

[1584] European Communities' response to question 35, para 114.
[1585] European Communities' comments on United States' response to question 38, para. 137.
[1586] European Communities' first written submission, para. 227.
[1587] European Communities' first written submission, paras. 212-217 and 227; European Communities' second written submission, para. 140.
[1588] European Communities' second written submission, para. 144.
[1589] European Communities' second written submission, para. 145.
[1590] See above, footnote 1556.
[1591] European Communities, second written submission, para. 146.

including those related to the re-routing of the private roads; (ii) Boeing was provided with a performance guarantee that the publicly-financed road improvements would at all times satisfy its current and future needs; (iii) the road improvements specified by Boeing were accorded the highest priority and were to be conducted within a specified time-frame counting from the moment when Boeing authorized the project; and (iv) each of these commitments was guaranteed to Boeing and reinforced by the MSA's "Make Whole" provision.[1592] Against this background, the European Communities asserts that the rationale behind the road improvement measures is to diffuse other users of the underlying roads over the improved roads in such a way that Boeing's performance requirements are at all times satisfied. While the roads may be open to other users, the combined effect of the legal right to define specifications and of the performance guarantee results in a situation where Boeing will never have to put up with more other users on the improved roads at issue than it is willing to tolerate.[1593] The European Communities argues that the MSA confers very significant rights on Boeing that go far beyond a simple right to be consulted and which create particular advantages for Boeing that are not available to other users of the roads. The transfer of legal rights to Boeing shows that the road improvements served Boeing's interest, as opposed to the public interest.[1594]

7.381 In support of its view that the construction of the rail-barge transfer facility by the Port of Everett is not a provision of general infrastructure that falls outside the scope of Article 1.1(a)(1)(iii), the European Communities argues that the totality of facts and circumstances demonstrates that the rail-barge transfer facility is partial or particular to Boeing.[1595] The MSA and the Amended and Restated Facilities and Services Agreement between the Port of Everett and Boeing[1596] provide for preferential use of the facility by Boeing.[1597] Because Boeing enjoys access on "a guaranteed and first priority basis", other users are inevitably limited in their access, and can in fact be deprived of their access.[1598] Moreover, by virtue of the MSA, Boeing has a legal right to a publicly-funded rail-barge transfer facility designed and built fully to Boeing's specifications. The Port of Everett made a legally binding commitment under the MSA to construct the rail-barge transfer facility, which commitment was one of the preconditions for Boeing's decision to locate its 787 assembly facility in Everett, and granted Boeing the right to define the specifications of the rail-barge transfer facility. The European Communities also asserts that the facility was designed in particular to facilitate transport of oversized components to the Boeing manufacturing and assembly facilities located at the Paine Field industrial area and that Boeing itself paid $14-$16 million necessary to complete the project.[1599]

7.382 In a summary of its position on why the rail-barge transfer facility cannot constitute a provision of general infrastructure, the European Communities submits that: (i) Boeing has a legal right to define the specifications of the publicly-financed improvements to the rail-barge transfer

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[1592] European Communities' comments on United States' response to question 38, para. 139; European Communities response to question 248, paras. 446-448; European Communities' response to question 364, para. 179.

[1593] European Communities' response to question 248, paras. 445 and 447.

[1594] European Communities' comments on United States' response to question 128, paras. 79-84.

[1595] European Communities' second written submission, para. 173.

[1596] Port of Everett – Boeing Amended and Restated Facilities and Services Agreement, Exhibit US-224.

[1597] European Communities' second written submission, para. 174.

[1598] European Communities' second written submission, para. 174; European Communities' comments on United States' response to question 128, para. 85. The European Communities refers to Article 3.2 of the Amended and Restated Facilities and Services Agreement between Boeing and the Port of Everett, which provides that "… cargos delivered to the Port and destined for delivery to Boeing designated facilities (whether or not owned by Boeing) shall be entitled to Preferential Use of the **[***]** Facility. The Port has the right to use the new Facility for all other purposes as long as it does not interfere with Boeing's Preferential Use". Port of Everett – Boeing Amended and Restated Facilities and Services Agreement, Exhibit US-224.

[1599] European Communities' second written submission, paras. 176-177.

facility; (ii) Boeing also has highly preferential access to the facility; (iii) the works were to be completed within a specified time-frame counted from the moment when Boeing "authoriz{es}" the project;[1600] (iv) each of these promises was guaranteed to Boeing and reinforced by the MSA's "Make Whole" provision; and (v) Boeing itself pays *part* of the costs of the project. [1601]

7.383 Similarly, the European Communities asserts that the expansion of the South Terminal facility by the Port of Everett is not general infrastructure within the meaning of Article 1.1(a)(1)(iii) because the totality of the facts and circumstances demonstrates that the South Terminal facility is partial or particular to Boeing.[1602] This project cannot qualify as general infrastructure even under the United States' own theory because, as with the rail barge facility, Boeing enjoys "guaranteed and first priority" access under the MSA and the Amended and Restated Services and Facilities Agreement between the Port of Everett and Boeing. This inevitably means that other users are limited in their access and can in fact be deprived of their access.[1603] Moreover, by virtue of the MSA, Boeing enjoys a legal right to a publicly-funded South Terminal facility designed and built fully to Boeing's specifications. The Port of Everett made a legally binding commitment under the MSA to expand the South Terminal facility, which commitment was one of the preconditions for Boeing's decision to locate its 787 assembly facility in Everett, and granted Boeing the right to define the specifications of the expansion of the South Terminal. Because the Port of Everett made a commitment under the MSA to expand the South Terminal facility, the fact that this expansion has not yet occurred is immaterial.[1604]

7.384 With respect to the argument of the United States that through its larger capacity the expanded South Terminal facility would be available to even more users than it currently is, the European Communities submits that given Boeing's preferential and guaranteed access, a larger capacity of the South Terminal simply means that Boeing can physically use more capacity. Larger capacity under the conditions of preferential access does not establish, in any way, that the infrastructure at issue could be considered general.[1605] The European Communities contests the United States' assertions that Boeing would not have had to undertake the port infrastructure improvements itself. The provisions of the MSA confirm that the infrastructure-related commitments contained therein, including with respect to the expansion of the South Terminal facility, were among the preconditions for Boeing's investment in Washington State.[1606]

7.385 In summarizing its position on why the expansion of the South Terminal facility cannot be considered to be a provision of general infrastructure, the European Communities argues that: (i) Boeing has a legal right to define the specifications of the publicly-financed improvements to the South Terminal facility; (ii) Boeing also has highly preferential *access* to the facility; (iii) Boeing has the right to rapid completion of the project; and (iv) each of these promises was guaranteed to Boeing and reinforced by the MSA's "Make Whole" provision. [1607]

7.386 In response to a panel question, the European Communities submits that to the extent that the Panel finds that the road improvement projects and the Port of Everett improvement projects are provisions of general infrastructure, certain *rights* as provided to Boeing in conjunction with these projects could independently constitute a provision of goods or services other than general

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[1600] Exhibits to MSA, Exhibit C-10, Point 4, Exhibit EC-59.
[1601] European Communities' comments on United States' response to question 38, para. 139.
[1602] European Communities' second written submission, para. 185.
[1603] European Communities' second written submission, para. 186; European Communities' comments on United States' response to question 128, para. 86.
[1604] European Communities' second written submission, paras. 187-189.
[1605] European Communities' comments on United States' response to question 128, para. 87.
[1606] European Communities' comments on United States' response to question 128, paras. 88-95.
[1607] European Communities' comments on United States' response to question 38, para. 139.

infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1608] The European Communities asserts, in this respect, that the totality of these rights gives Boeing what it terms "legal certainty" with respect to elements of the infrastructure improvements that are important to the operation of its 787 production facility and that could otherwise result in economic losses.[1609]

7.387 In support of its view that these legal rights constitute a provision of goods and services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement, the European Communities argues that the Appellate Body in *US – Softwood Lumber IV* found that by granting a right to harvest standing timber, Canadian provincial governments provided goods within the meaning of Article 1.1(a)(1)(iii). The European Communities asserts that it follows from this that in this case, by granting certain rights to Boeing in the MSA, the Washington State authorities provide goods and services to Boeing within the meaning of Article 1.1(a)(1)(iii).[1610]

7.388 The European Communities asserts that it has demonstrated that the MSA, by virtue of the specific rights conferred on Boeing, provides legal certainty to Boeing that goes beyond the Nickel Funding Package and the general road improvement policy of Washington State. None of the rights at issue are generally available, let alone granted or conferred upon any company through the Nickel Funding Package. It is this legal certainty enjoyed by Boeing which distinguishes the road improvement measures provided for in the MSA from the Nickel Funding Package or from any other similar general legislation or government initiative.[1611] Because Boeing enjoys a permanent guarantee that the road improvements at issue will meet certain performance requirements, the Washington State authorities must provide certain services to Boeing, such as planning, maintenance, scheduling, construction. Thus, under the MSA the State of Washington has provided and will provide Boeing rights to past, current and future services in the same manner that in *US – Softwood Lumber IV* Canadian authorities provided harvesters rights to goods.[1612]

7.389 The European Communities argues, in the alternative, that the I-5 and SR 527 expansion projects, the construction of the rail-barge transfer facility and the expansion of the South Terminal are financial contributions in the form of potential direct transfers of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement on the grounds that, by virtue of Article 10.4.1 of the MSA, "the State and City must provide Boeing with a remedy of equivalent effect if they fail to make the promised road improvements" and "the Port must provide Boeing with a remedy of equivalent economic effect if it cannot fulfil its promised rail-barge and South Terminal improvements".[1613]

7.390 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that the road improvement measures confer "benefits" upon Boeing's LCA division because "these improvements relate explicitly to the production of commercial aircraft and are provided to Boeing's LCA division on non-market terms".[1614] Specifically, the European Communities argues that: (i) "Boeing is not required to pay anything in return for these road improvements, which Boeing will use to facilitate production of its LCA;" (ii)

[1608] European Communities' response to question 249, paras. 454, 459. The European Communities refers here to rights enjoyed by Boeing under the MSA as described above, paras. 7.380, 7.382 and 7.385 of this Report.

[1609] European Communities' response to question 249, para. 454.

[1610] European Communities' response to question 249, para. 454.

[1611] European Communities' response to question 364, paras. 178-183.

[1612] European Communities' response to question 364, paras. 184-186.

[1613] European Communities' first written submission, paras. 228 and 258. This is a generic argument made by the European Communities with respect to all measures contained in "The Boeing Incentive Package". The European Communities has clarified that it is only necessary for the Panel to consider this alternative argument if the Panel does not agree with its principal argument as to why the measures at issue are financial contributions. European Communities' response to question 124, para. 84.

[1614] European Communities' first written submission, para. 234.

"the advantages conferred on Boeing's LCA division by the 787 Road Improvement Package are provided on non-market terms;" and (iii) "Boeing is paying nothing in return for the associated commitments in the Master Site Agreement, while a market participant would no doubt need to provide consideration for such contractual commitments".[1615]

7.391 Similarly, the European Communities argues that the construction of the rail-barge transfer facility and the expansion of the South Terminal by the Port of Everett confer "benefits" upon Boeing's LCA division because "these improvements relate explicitly to the production of the 787 and are provided to Boeing's LCA division on non-market terms".[1616] Specifically, the European Communities argues that: (i) "{a}lthough Boeing generally pays fees for use of the Port facilities, the fees do not cover these Port of Everett improvements that facilitate Boeing's 787 production;" and (ii) the "advantages conferred on Boeing's LCA division by these Port of Everett improvements are provided on non-market terms", and "Boeing is paying nothing in return for these improvements, while a market participant would no doubt need to provide consideration for such tailored improvements to rail and terminal facilities".[1617]

7.392 In response to the argument of the United States that Boeing receives no benefit from the rail-barge transfer facility, the European Communities argues that the Port of Everett itself has stated that "{t}he facility will be used to support the 747, 767 and 777 Airplane programs, and be used as a backup facility to the 787 Dreamliner". The time and effort saved by transporting parts from the Port to Paine Field as a result of this rail-barge transfer facility will be an immense benefit to Boeing. The European Communities also submits that the fact that Boeing is paying for the cost overrun to construct the rail-barge transfer facility is irrelevant. The critical point is that Boeing does not need to repay the $15.5 million committed by the State of Washington.[1618]

7.393 The European Communities submits that, while the United States argues that Boeing does not receive a benefit because the Port of Everett charges usage fees that cover its capital and operating costs for all capital improvements to the South Terminal, the United States has provided no evidence to support this assertion, such as the rates charged to Boeing (or the rates that will be charged to Boeing) in comparison with commercial rates. The fact that the Port of Everett operates at a profit does not demonstrate that the fees charged by the Port cover the costs of expanding the South Terminal.[1619]

Arguments of the United States

7.394 The United States argues that the road improvement projects challenged by the European Communities are general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement and are therefore not financial contributions. With regard to the Port of Everett improvement measures, the United States submits that the rail-barge transfer facility is general infrastructure, that the South Terminal expansion has not occurred, and if it does occur, will be general infrastructure, the expenses of which are fully funded through user fees.[1620]

[1615] European Communities' first written submission, paras. 232-233.
[1616] European Communities' first written submission, para. 265.
[1617] European Communities' first written submission, paras. 263-264.
[1618] European Communities' second written submission, paras. 180-181.
[1619] European Communities' second written submission, para. 190.
[1620] United States' first written submission, paras. 536 and 543. The United States characterizes the measures at issue as "quintessential general infrastructure". By this it means "that the measures are the purest, or most typical type of general infrastructure measures. In particular, the United States considers these measures at issue to be 'quintessential general' infrastructure because there are no limitations on the availability of the infrastructure at issue". United States' response to question 38, para. 112.

7.395 The United States asserts that, in the light of the ordinary meaning of the terms "general" and "infrastructure", general infrastructure within the meaning of Article 1(a)(1)(iii) means installations and services that are available to all or nearly all inhabitants of the relevant area. Thus, infrastructure is general if the infrastructure is universally available to all or nearly all inhabitants or users of the relevant area.[1621] The United States emphasizes that Article 1.1(a)(1)(iii) asks whether the infrastructure is other than general, not whether the infrastructure was motivated by a particular goal.[1622] The United States contends that there is no support in the text of the SCM Agreement, its negotiating history and its object and purpose for the argument of the European Communities that even where infrastructure is usable or accessible to the public at large it may not be general.[1623]

7.396 The United States considers that the object of the inquiry under Article 1.1(a)(1)(iii) as to whether infrastructure is general is different from the inquiry under Article 2 as to whether a subsidy is specific. While some of the factors relevant to determining whether infrastructure is general may also be relevant to determining whether a subsidy is specific, it would not be appropriate to merely apply the same criteria to both inquiries.[1624]

7.397 The United States asserts that infrastructure does not lose its general availability simply because the government promised a particular constituent or constituents that it would undertake the project. In basing its challenge to the infrastructure-related measures on the MSA, the European Communities ignores the fact that companies will frequently decide that it is only feasible to locate their operations in a certain place if the necessary infrastructure exists. The fact that a particular company has a strong interest in ensuring the availability of infrastructure necessary to conduct its operations does not make the infrastructure improvement project non-general if the infrastructure improvement is available to all users.[1625]

7.398 The United States contends that the European Communities sets forth an incorrect legal standard for the purposes of Article 1.1.(a)(1)(iii) which, if accepted, would lower the complaining party's burden with respect to establishing that infrastructure is other than general, while raising the evidentiary standard that a responding party must meet to rebut a prima facie case. The United States identifies two specific problems with the European Communities' proposed standard: first, that merely the existence of facts that suggest – but not necessarily establish – that "the infrastructure might be particular in some way" would be sufficient to establish non-generality, and, second, that a party seeking to establish that a transaction provides "general infrastructure" would not need to have "clear and unambiguous" proof, but only evidence sufficient to raise a presumption that the transaction provides general infrastructure. Under this approach, rather than establishing that government-provided goods or services are other than general infrastructure, a complaining party merely would have to provide "facts suggesting that the infrastructure might be particular in some way". As such, this approach is contrary to the principles governing the allocation of burden of proof in WTO dispute settlement. The United States argues that, while an analysis of whether infrastructure is general should be based on an examination of the totality of the facts, there is no basis for the

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[1621] United States' first written submission, para. 46; United States' response to question 35, paras. 91, 93; United States' response to question 36, para. 99; United States' response to question 37, para. 105; United States' response to question 38, para. 112. The United States argues that the legal test for determining whether particular infrastructure is general infrastructure is the same as the legal test for determining whether an improvement to that infrastructure is general infrastructure. United States' response to question 36, para. 99.

[1622] United States' response to question 37, paras. 105, 108. The United States argues that while "{b}ackground and beneficiaries of infrastructure improvements are not in themselves determinative of the question of whether infrastructure is general...{e}lements of historical and other background can be among the factual circumstances relevant to a demonstration that the infrastructure at issue is or is not 'general' in the sense of availability to all users or inhabitants". United States' response to question 245, para. 407.

[1623] United States' response to question 35, paras. 92-96.

[1624] United States' response to question 35, paras. 97-98.

[1625] United States' response to question 37, paras. 106-107.

suggestion that as long as the infrastructure at issue is "particular in some way, such infrastructure cannot be regarded as general", as the European Communities argues. Because the European Communities fails to explain the meaning of "particular in some way", it is impossible to tell why a finding that infrastructure is "particular in some way" should lead to a finding that infrastructure is other than general. Thus, it is insufficient for the European Communities to assert that there are "facts suggesting that the infrastructure might be particular in some way". Instead, the European Communities' burden is to establish, based on the totality of the facts, that the infrastructure measures it challenges are not universally available.[1626]

7.399 The United States argues that while the fact that infrastructure or an infrastructure improvement was made according to the specifications of one particular company may be relevant to the Panel's general infrastructure analysis, two types of situations need to be distinguished. The first type of situation arises where a government, in developing, designing, and constructing infrastructure takes into account through consultation or other forms of information gathering, the interests and needs of those companies or individuals who use or are expected to use the infrastructure. This type of "taking into account", according to the United States, is a normal planning function and would not normally, in itself, result in *de jure* or de facto limitations on availability of the infrastructure. The second type of situation arises where the infrastructure is truly tailor-made to the needs and specifications of a particular company or sector in a way that effectively excludes others from using the infrastructure. In such a situation, the infrastructure would be non-general because the "tailor-making" has resulted in *de jure* or de facto limitations on the availability of the infrastructure. [1627]

7.400 The United States argues that the European Communities' proposition that general infrastructure is infrastructure that does not "alter the competitive position" of firms is unsupported by the text of the SCM Agreement as interpreted in accordance with customary rules of interpretation of public international law.[1628] In this connection, the United States contends that this proposition has no basis in the ordinary meaning of the terms "general infrastructure" and is nonsensical because all infrastructure would be non-general under the European Communities' interpretation given that most infrastructure will alter the competitive position of firms located in the area where that infrastructure is available. This does not make such infrastructure non-general in any way.[1629]

7.401 The United States argues that all of the infrastructure improvements challenged by the European Communities constitute general infrastructure because they are universally available to all users or inhabitants of the relevant area.[1630] In support of its view that the I-5 and SR 527 expansion projects are general infrastructure, the United States argues that the roads in question (and their improvements) are open to all and serve a broad range of people, businesses, and communities.[1631] I-5 and SR-527 are public roads with no limitations on availability. There were no limitations on the availability of these roads to the public before the improvements, and there were no such limitations after the improvements. Accordingly, the improvements to these roads constitute general infrastructure.[1632]

7.402 The United States rejects the European Communities' assertion that the State of Washington created the two road improvement projects in question specifically for Boeing's benefit as part of the MSA. The I-5 and SR 527 expansion projects had been identified as priorities in the final report

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[1626] United States' comments on European Communities' response to question 35, paras. 118-124.
[1627] United States' response to question 128, paras. 64-65.
[1628] United States' comments on European Communities' response to question 129, paras. 74-87.
[1629] United States' comments on European Communities' response to question 129, paras. 86-87.
[1630] See e.g. United States' response to question 36, para. 99; United States' response to question 246, para. 411.
[1631] United States' first written submission, para 521 and 536.
[1632] United States' response to question 36, para. 100.

issued in November 2000 of the Blue Ribbon Commission, which had been established in 1998 to conduct a comprehensive analysis of the State's transportation system. The two projects were part of the Nickel Package, a transportation initiative that was approved by the Washington State legislature in 2003 and that devoted $3.9 billion to construct 158 transportation improvement projects around the State of Washington from 2003 to 2013, including highway improvement, highway preservation, ferries, local roads, railways, and public transportation.[1633] Closely related to this, the United States argues that Washington State did not undertake the I-5 and SR-527 improvements as part of an agreement with Boeing.[1634]

7.403 The United States explains that I-5 is part of the U.S. Interstate Highway System and is the major north-south highway on the West coast of the United States, running from Canada to Mexico and used by countless businesses, tourists and citizens, all of which are affected by traffic delays and safety concerns. Traffic congestion on I-5 in Everett had been recognized as one of the worst "choke points" in the State.[1635] The United States points out that SR-527 is a major thoroughfare between the I-5 and Interstate 405 freeways and argues that the need for improvements to the SR 527 between 112th Street and 132nd Street had been recognized well before any Boeing expansion project and had been planned by WSDOT for years. The accident and fatality rates along SR 527 were higher than the State average. Based on the WSDOT's standards for a single-lane highway, traffic on SR 527 was too heavy and a multi-lane highway was needed already before the 2003 Nickel Package.[1636]

7.404 The United States also contests the European Communities' assertion that work on the I-5 and SR 527 expansion projects coincided with the beginning of the 787 programme and that the State legislature had rejected previous efforts to improve these same roads. The failure to fund these projects was part of a pervasive state-wide problem in funding transportation infrastructure, and ultimate funding of the projects was part of a broad infrastructure solution for the State.[1637] Washington State's inability to obtain funding for the I-5 and SR-527 improvements fails to establish that they are other than general infrastructure.[1638]

7.405 With regard to the European Communities' argument that projected traffic increases along I-5 and SR-527 reflect anticipated increases in Boeing's employment level, the United States argues that the European Communities disregards the fact that Boeing is but one of innumerable businesses and residences accessible from I-5 and SR-527 in a dynamic and growing area of the United States.[1639] The United States rejects the characterization of the road improvement measures as "a specific improvement to a particular part of that highway done in the vicinity of, according to the specifications of, and to the satisfaction of one particular company, which enjoys an ongoing contractual performance guarantee with respect to the highway improvement". First, under the logic of this argument, any improvement to a public road would be non-general infrastructure merely because it is near a particular company. Second, there is no basis in the text of the MSA for the assertion that the road improvements were undertaken "according to the specifications of, and to the satisfaction of one particular company". The MSA provides only for consultation with Boeing. Given that Washington State consults with a wide range of citizens, businesses and other users in

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[1633] United States' first written submission, para. 528.

[1634] United States' response to question 36, para. 106.

[1635] United States' first written submission, para. 531. The United States contends that the fact that traffic congestion problems are not limited to weekdays, when the Boeing plant is fully operational, shows that this is not just a Boeing problem.

[1636] United States' first written submission, para. 533. The United States quotes a WSDOT study which notes that "{t}here has been a large increase in traffic volumes **[***]** and future growth is forecast to increase at 3.5% annual rate". United States' first written submission, para. 533, referring to SR 527 Route Development Plan, Exhibit US-208, p.3.

[1637] United States' first written submission, para. 535.

[1638] United States' response to question 36, para. 109.

[1639] United States' response to question 36, para. 101.

designing road improvements[1640], such consultation alone does not make the infrastructure non-general. Third, the United States denies that under the MSA Boeing "enjoys an ongoing contractual performance guarantee with respect to the highway improvement". The MSA in fact contemplates the possibility of a change in circumstances in the "Make Whole" provision.[1641] The United States also submits that the provisions of the MSA cited by the European Communities as support for its argument that "Boeing-specified road improvements were accorded the 'highest priority' and were to be conducted within a specified time-frame counted from the moment when Boeing 'authorizes the project' " were designed to affirm the State's intention to make the improvements that were already included in the Nickel Funding Package and to highlight the steps it had already undertaken in this regard.[1642]

7.406 The United States argues that the $15.5 million in funding provided by the State of Washington to the Port of Everett for construction costs for the rail-barge transfer facility[1643] is not a financial contribution under the SCM Agreement because this facility constitutes general infrastructure. Alleviating traffic congestion is the type of quintessential general infrastructure project in which governments engage. Facilitating the ability to transport large containerized cargo between barges and industries will help support current and future industrial operations of many companies, including Boeing.[1644] Because the rail-barge transfer facility was designed to ease traffic congestion and is available to any business, the improvement of the Port of Everett with a rail-barge transfer facility is general infrastructure.[1645] Both the consideration of the expansion of the South Terminal facility and the creation of the rail-barge transfer facility were a response to general congestion problems and were not merely "tailor-made" for Boeing, as argued by the European Communities.[1646] The United States argues that the MSA does not provide a legal right to Boeing that the infrastructure measures at issue will be made according to Boeing's specifications but only provides that the public authorities will consult with Boeing in preparing drawings and specifications.[1647] The United States argues that Boeing would not have had to undertake the infrastructure improvements at issue itself because the reason for the Port of Everett to construct the rail-barge transfer facility was to avoid having to shut down the main rail line for between one and two hours every time it needed to transfer cargo from large rail barges. This improvement was, however, in no way necessary for Boeing because Boeing could transfer oversized containers onto rail barges at the Port's Marine terminal and

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[1640] In response to question 128, the United States submits a document, Exhibit US-1296, which it asserts, shows that "the public authorities took into account the needs of Boeing and many other users of the infrastructure".

[1641] United States' comments on European Communities' response to question 35, paras. 125-128.

[1642] United States' response to question 246, para. 415.

[1643] The United States observes that this funding was insufficient to complete the necessary changes to the facility to make it operational and that pursuant to the Amended and Restated facilities and Services Agreement signed in the fall of 2006, Boeing agreed to cover the costs necessary to complete the project. United States' first written submission, paras. 546-547.

[1644] United States' first written submission, para. 546. By way of background, the United States observes that the rail-barge transfer facility is located in southwest Everett near the Everett/Mukilteo boundary and is directly adjacent to the BNSF freight railroad mainline, which provides service between Seattle and Chicago. According to the project's October 2004 Environmental Impact Statement, an average of 44 trains a day, both commuter and freight trains, will use this corridor. By 2010, 64 trains per day are projected to use this corridor. In the past, when oversized containers delivered to the Port of Everett were transferred to railcars, the authorities had to shut down the mainline between the Port of Everett's Marine Terminal and the Japanese Gulch spur for between one and two hours, which affected all rail traffic on the corridor. The requirement that trains carrying oversized cargo travel during the daylight hours further compounded the problem because this is when the rail corridor is most heavily used. The United States asserts that the new rail-barge transfer facility will reduce the time that the mainline is shut down to only 15 minutes. United States' first written submission, paras. 544-545.

[1645] United States' response to question 36, para. 102.

[1646] United States' response to question 128, para. 73.

[1647] United States' response to question 128, para. 74.

transport them from there to its facility. It was the other users who experienced most of the hindrance and for whom a solution needed to be found. Moreover, even though the rail-barge transfer facility now exists, Boeing is not actually using it because Boeing has shifted to air shipments of parts.[1648]

7.407 In response to the assertion of the European Communities that Boeing enjoys preferential access to the rail-barge transfer facility and that Boeing itself pays part of the cost of the project, the United States argues that the Port of Everett - Boeing Amended and Restated Facilities and Services Agreement specifically foresees use by third parties. The government's ability to obtain contributions from private parties for the construction of certain infrastructure is not in itself relevant to the consideration of whether such infrastructure is general in the absence of other factors that limit access to such infrastructure to certain users.[1649]

7.408 In respect of the expansion of the South Terminal by the Port of Everett, the United States argues that although the MSA states that the Port will expand the South Terminal to support direct ships from Japan, the Port has not implemented this provision. The MSA was drafted to capture numerous options, and the parties to the MSA understood that not all provisions would be implemented. No work has been done to expand the South terminal and there has been no subsidy to Boeing.[1650] The United States further argues that this type of project is the type of general infrastructure project that government entities often undertake to improve conditions for all users, given that a tenfold increase in traffic volume has taken place over the last couple of years. This increase in traffic is unrelated to Boeing because Boeing has shifted to air shipments for components for the 787. Therefore, if the project were implemented, there would be no financial contribution because the expansion would be general infrastructure under Article 1.1(a)(1)(iii) of the SCM Agreement, given its broad use and openness to all users.[1651]

7.409 In addition, the United States argues that Boeing would not have had to undertake the infrastructure improvements at issue itself. Boeing has shifted to air shipments and therefore would not need to undertake expansion of the South Terminal if the Port does not.[1652] Finally, with regard to the provision of preferential access to the South Terminal facility, the United States argues that the preferential access negotiated by a particular user does not necessarily limit the universal availability of the infrastructure. Boeing's agreement with the Port of Everett sets forth a number of rights and obligations for both Boeing and the Port, including an obligation for Boeing to pay certain agreed fees for use of the facilities. There is nothing in this agreement that prevents other users or potential users from negotiating similar access to the facilities.[1653]

7.410 The United States rejects the European Communities' argument that certain rights as provided to Boeing in conjunction with the road and port improvements under the MSA could independently constitute a provision of goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement. Apart from the fact that this is an entirely new argument, presented by the European Communities at a late stage of this proceeding in a most summary fashion, this argument is without merit. The European Communities does not explain how the provision of certain rights regarding the road improvements would be either a "good" or a "service". The Appellate Body's finding in *US – Softwood Lumber IV* does not support the European Communities' argument. The Appellate Body found that the granting of a right to harvest standing timber constitutes a provision of goods. However, the provision of "legal certainty" is not relevant to the question of whether road improvements constitute general infrastructure, and *US – Softwood*

[1648] United States' response to question 128, para. 77.
[1649] United States' response to question 246, para. 418.
[1650] United States' first written submission, para. 549.
[1651] United States' first written submission, para. 550.
[1652] United States' response to question 128, para. 77.
[1653] United States' response to question 246, para. 419.

Lumber IV does not address the meaning of general infrastructure. The United States argues that the mere fact that a government promises to build certain infrastructure does not make such infrastructure non-general as long as it is not indicative of or does not result in any limitations on the availability of such infrastructure. Furthermore, the United States considers that the European Communities provides no support for its assertion that certain rights "were provided only to Boeing, and they give Boeing legal certainty". The European Communities does not explain how "legal certainty" is relevant for the general infrastructure analysis. Finally, the European Communities has not shown that any "legal certainty" was provided to Boeing that was not available under the general road improvement policy of the State of Washington with regard to all road improvements that were part of the Nickel Package, which was in process well before the State and Boeing entered into the MSA.[1654]

7.411 The United States also asserts that none of the elements relied upon by the European Communities with regard to this legal certainty or legal right changes the general availability of the road improvements at issue.[1655] As to the European Communities' argument that the legal certainty constitutes a financial contribution because it requires the State of Washington to provide certain services to Boeing, the United States argues that the European Communities has not actually established the existence of any sort of guarantee or legal certainty but that even if improvement measures or services related to such improvement measures were guaranteed to Boeing, this would not have resulted in any kind of limitation on the availability of the infrastructure.[1656] Finally, the United States rejects the argument of the European Communities that the Appellate Body report in *US – Softwood Lumber IV* constitutes support for its view that a right to certain services can be treated as a provision of such services for purposes of Article 1.1(a)(1)(iii) of the SCM Agreement. The services provided in connection with the road improvements at issue are the same services that benefit all users of the roads. Because the services do not place any limitations on the general availability of the roads, they do not transform the road improvements into anything other than general infrastructure.[1657]

7.412 With respect to the alternative argument of the European Communities that the measures at issue give rise to potential direct transfers of funds in the sense of Article 1.1(a)(1)(i) of the SCM Agreement, the United States submits that, contrary to the argument of the European Communities, Article 10.4.1 of the MSA does not provide Boeing with a guarantee to any kind of payment or transfer of funds and, as such, cannot give rise to a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1658]

7.413 As to whether the measures at issue confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the United States argues that there is no financial contribution from the I-5 and SR 527 expansion projects because the two projects are general infrastructure and that, therefore, there is no benefit to Boeing.[1659]

7.414 Regarding the rail-barge transfer facility, the United States argues that, aside from the fact that there is no financial contribution because the facility is general infrastructure, Boeing also receives no benefit from this facility because it is not obtaining goods and services at less than market value. The funding provided by the State of Washington was insufficient to complete the project. Boeing has agreed in the Amended and Restated Facilities and Services Agreement signed in the fall of 2006 by Boeing and the Port of Everett to cover the additional $14-$16 million necessary to make the facility operational. Given that Boeing is paying the balance of the costs required to complete the

[1654] United States' comments on European Communities' response to question 249, paras. 442-444.
[1655] United States' comments on European Communities' response to question 364, paras. 184-187.
[1656] United States' comments on European Communities' response to question 364, paras. 188-191.
[1657] United States' comments on European Communities' response to question 364, paras. 192-194.
[1658] United States' response to question 124.
[1659] United States' first written submission, para. 537.

rail-barge transfer facility, it is certainly not receiving access to or use of this facility at less than market value.[1660]

7.415 The United States also submits that Boeing's agreement with the Port of Everett clearly set forth a number of rights and obligations of Boeing and the Port of Everett, including an obligation for Boeing to pay certain agreed fees for the use of the Port's facilities. The failure of the European Communities to make a prima facie case that such fees are insufficient as compared to the price a commercial investor would have demanded means that it has failed to make a prima facie case of the existence of a benefit. Moreover, the United States argues with respect to both the South Terminal and the rail-barge transfer facility that Boeing does not in fact use these facilities and therefore cannot benefit from them.[1661]

7.416 Regarding the expansion of the South Terminal, the United States argues that there is no benefit to Boeing because Boeing and others pay usage fees and the Port of Everett does not subsidize its customers by charging rates that do not lead to a profit. Furthermore, the Port is not providing Boeing an advantage on non-market terms because it seeks recovery of its capital and operating costs for all capital improvements to the South Terminal.[1662]

Arguments of Third Parties

Australia

7.417 Australia observes that a "use" or "access" test should be utilized to assess whether infrastructure is general or non-general within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1663] In particular, Australia considers that the presence of restrictions on access and use of certain infrastructure may be a relevant consideration, but not a decisive one, with respect to whether that infrastructure is general infrastructure.[1664] Australia argues that the facts and circumstances surrounding the provision of "general infrastructure" need to be examined to determine whether the provision of infrastructure confers a benefit to an enterprise. In addressing this issue, the Panel needs to analyse whether the infrastructure is for exclusive or limited use by enterprises. It should also analyse separately any terms and conditions relating to the use of infrastructure to determine whether such infrastructure is for exclusive or limited use by enterprises.[1665]

7.418 Australia considers that while the general infrastructure exclusion under Article 1 of the SCM Agreement should be distinguished from the specificity analysis required under Article 2, the concept of specificity more broadly, and the factors that may be considered in determining specificity, may provide guidance in determining whether the provision of infrastructure by government under Article 1.1(a)(1)(iii) is of a general nature.[1666]

7.419 With regard to improvements to infrastructure, Australia takes the view that the Panel would need to examine the circumstances and the details surrounding the provision by the government of any improvements to general infrastructure. If the Panel concludes that particular infrastructure constitutes "general infrastructure", any facts and circumstances surrounding any subsequent improvement to that general infrastructure would need to be examined. Such consideration would need to include whether the infrastructure continues to be generally available or multi-user; and

[1660] United States' first written submission, para. 547.
[1661] United States' comments on European Communities' response to question 249, paras. 441 and 444.
[1662] United States' first written submission, para. 552.
[1663] Australia's written submission, para. 51.
[1664] Australia's written submission, para. 51.
[1665] Australia's written submission, para. 51.
[1666] Australia's written submission, para. 52.

whether the improvements have been tailored or limited to certain users or enterprises.[1667] The terms and conditions surrounding the improvements to the general infrastructure would also need to be assessed.[1668]

Canada

7.420 Canada argues that the term "general" (interpreted as "not specifically limited in application" and as distinguished from the broader phrase "not limited in application") helps convey the concept that, for government-provided infrastructure to be transformed from "general" to non-general or restricted application, the limitation must be clearly specified. Canada takes the position that the absence of any restrictions/limitations on the use of certain infrastructure by the public is decisive of whether the infrastructure is general infrastructure.[1669] Accordingly, a "use" or "access" test should be utilized to assess whether infrastructure is general or non-general within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement. Such a "use" or "access" test should be sufficient – i.e. if the infrastructure at issue is useable by or accessible to the public, then it should be considered general without any further considerations.[1670]

7.421 Canada argues that because subsidy and specificity determinations constitute discrete and sequential findings under the SCM Agreement, it follows that a finding under Article 1.1(a)(1)(iii) that government-provided infrastructure is not general cannot be equated with a finding under Article 2.1 of the Agreement that a resulting subsidy is specific, as this would introduce an element of redundancy to the analysis. Therefore, the test for de facto specificity in Article 2.1(c) of the SCM Agreement is not the relevant test in an analysis under Article 1.1(a)(1)(iii), as the application of the de facto specificity test to government-provided infrastructure available to the public would give rise to systemic inequities, disadvantaging Members whose lack of national or regional economic diversification results in predominant use of government-provided infrastructure by certain enterprises.[1671]

7.422 As to improvements to general infrastructure, Canada observes that nothing in the SCM Agreement indicates that improvements to general infrastructure change the status of that infrastructure so long as it remains generally available to the public.[1672] Because the roads and ports in question in this dispute are public, improvements to these roads and the port facilities are improvements to general infrastructure, and the European Communities has identified no government measure that specifically restricts the ability of the general public to use the improved road network or port facility at issue.[1673] Canada argues that while improvements to private roads would appear to raise different considerations, the European Communities does not appear to allege that any such improvements have been provided to date. The European Communities' challenge in respect of road improvements to the appropriation of $262.3 million for the I-5 expansion project and $28.9 million for the SR-527 expansion project does not support the European Communities' claim because both, the I-5 and SR-527, are major public highways.

7.423 In Canada's view, to the extent infrastructure is general, improvements to such infrastructure that may appear to benefit a single or limited number of users frequently benefit new economic actors

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[1667] Australia's response to question 9 (b).
[1668] Australia's written submission, para. 52.
[1669] Canada's written submission, paras. 20, 22, and 27. See also, Canada's response to question 9(a), para. 8.
[1670] Canada's written submission, para. 27.
[1671] Canada's written submission, paras. 25-26.
[1672] Canada's response to question 9(b), para. 9. Canada considers that the public reasonably expects that a government will maintain general infrastructure in the public interest, for instance to permit the supply of inputs to production and the distribution of goods to market.
[1673] Canada's written submission, para. 20.

and activities that may not have been foreseen when the improvements were made. However, specific restrictions on the use of a distinguishable element of infrastructure to certain enterprises may, in appropriate circumstances, justify separate consideration of that element, whether or not it is attached or otherwise connected to general infrastructure. Temporary restrictions/limitations on the use of infrastructure to certain users do not necessarily deprive that infrastructure of its general nature if there is a reasonable expectation that general use will resume in the foreseeable future (e.g. an exclusive use agreement for a period before public use is practicable or covering a particular season when public use is not practicable). A temporary right of exclusive use may, however, require independent consideration to determine if that conferral of an exclusive right itself constitutes a provision of a good (or service).[1674]

Korea

7.424 Korea argues that the absence of any restrictions/limitations on the use of certain infrastructure (or evidence that infrastructure provides a benefit to the general public or common goods to the public) would be decisive with respect to whether or not that infrastructure is general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1675] Such a "use" or "access" test should be sufficient – i.e. if the infrastructure at issue is useable by or accessible to the public, then it should be considered general without any further considerations.[1676]

Evaluation by the Panel

7.425 Article 1.1 of the SCM Agreement reads in relevant part:

> "1.1 For the purpose of this Agreement, a subsidy shall be deemed to exist if:
>
> (a)(1) there is a financial contribution by a government or any public body within the territory of a Member (referred to in this Agreement as "government"), i.e. where:
>
> {...}
>
> (iii) a government provides goods or services other than general infrastructure, or purchases goods"

7.426 The issue before us is whether, as argued by the European Communities, certain infrastructure improvement measures referred to in the MSA are financial contributions within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement. If we reject this argument, we will have to consider the alternative argument made by the European Communities that these measures involve potential direct transfers within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.

7.427 In *US – Softwood Lumber IV*, the Appellate Body confirmed that: "{I}n the context of Article 1.1(a)(1)(iii), all goods that might be used by an enterprise to its benefit—including even goods that might be considered *infrastructure*—are to be considered 'goods' within the meaning of the provision, unless they are infrastructure of a *general* nature".[1677] Accordingly, where a government

[1674] Canada's response to question 9(c), para. 10. Canada emphasizes that the focus of the inquiry in Article 1.1(a)(1)(iii) is on what a government actually "provides" to a recipient or recipients. In cases where a government has provided something less than complete and exclusive rights to a given item of infrastructure, the focus of the inquiry into whether the government has provided a financial contribution should not be on the totality of the infrastructure, but on the part of it that is actually being provided by the government exclusively to the recipient(s).

[1675] Korea's written submission, paras. 30 and 32.

[1676] Korea's written submission, para. 32.

[1677] Appellate Body Report, *US – Softwood Lumber IV*, para. 60 (emphasis original).

provides infrastructure goods and services, a subsidy is deemed not to exist where such goods or services are "*general* infrastructure".

7.428 The question before the Panel is whether the road improvement projects and the Port of Everett improvement measures referred to in the MSA constitute the provision of infrastructure that is not general, as argued by the European Communities, and whether these measures are, therefore, financial contributions within the meaning of Article 1.1(a)(1)(iii).[1678] The disagreement between the parties on this question reflects differences of view regarding (i) the correct legal interpretation of the concept of "general infrastructure"; (ii) the analysis of certain factual aspects of the measures at issue; and (iii) the interpretation of the relevant provisions of the MSA.

7.429 The key question of interpretation arising out of the arguments advanced by the parties in regard to the road improvement measures at issue is whether the existence of limitations on use or access by the public at large should be considered to be determinative of whether or not an infrastructure improvement measure[1679] is general.

7.430 The European Communities does not contest that the improvements resulting from the I-5 and SR 527 expansion projects are available without limitation to all users. However, the European Communities argues that this factor is relevant but not determinative. The European Communities argues that infrastructure cannot be general if the totality of facts and circumstances suggests that the infrastructure is "partial or particular in some way" and that infrastructure can be partial or particular because of facts and circumstances other than limitations on the use or access by the public. By contrast, the United States considers that infrastructure is general if it is universally available to all or nearly all inhabitants or users of the relevant area.[1680]

7.431 The Panel considers that, in the light of the specific facts of this case, it is not necessary to address the question of whether the existence of limitations on the use of infrastructure by the public should be treated as the determining factor in analyzing whether a measure is general infrastructure. This is because, even assuming that the European Communities is correct in its legal interpretation of the concept of "general infrastructure" and that, therefore, the fact that the improvements resulting from the I-5 and SR 527 expansion projects are available to the public is not sufficient to conclude that they are general infrastructure[1681], the Panel finds that there is insufficient factual support for the contention of the European Communities that the I-5 and SR 527 expansion projects were specifically designed to benefit Boeing and therefore cannot be treated as general infrastructure. The Panel recalls that the European Communities asserts that the I-5 and SR 527 expansion projects are "part of a tailor-made package for Boeing to improve transportation infrastructure only in the vicinity of the

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[1678] The United States does not dispute that the alleged financial contributions were provided by a "government", nor does it dispute that the measures in question constitute the "provision" of "goods and services" that are "infrastructure".

[1679] The issue in dispute between the parties is whether certain *improvements* to I-5 and SR 527, rather than I-5 and SR-527 themselves, are "other than general infrastructure". The parties agree that the fact that infrastructure is general does not necessarily mean that *improvements* to that infrastructure are also general.

[1680] Several third parties agree with the view that the decisive consideration in determining whether infrastructure is general is whether there are any limitations on the use of the infrastructure by the public.

[1681] The Panel has some doubts about the argument of the European Communities that an interpretation of Article 1.1(a)(1)(iii) of the SCM Agreement in accordance with Articles 31 and 32 of the Vienna Convention supports the proposition that where, as in the present dispute, there are no limitations on the use of or access to an infrastructure improvement measure by the public, such a measure should nevertheless be considered to be non-general if it can be concluded, based on an analysis of other factors, that the measure is "partial or particular in some way". The Panel finds that a strong argument can be made that the absence of any limitations on the public use of or access to the road improvements resulting from the I-5 and SR 527 expansion projects is sufficient to conclude that these road improvements are general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

Boeing facility at Everett"[1682] and that the projects serve "Boeing's interest, as opposed to the public interest".[1683] As explained below, the evidence before the Panel does not support these assertions.

7.432 There is ample evidence before the Panel demonstrating that: (i) the need to undertake the I-5 and SR 527 expansion projects had been identified well before Boeing decided to site its assembly facility in Everett; (ii) the projects were conceived as part of a general policy of the authorities in the State of Washington to improve the State's transportation infrastructure; (iii) the projects were undertaken to address a range of economic, safety and environmental concerns; (iv) funding for the projects was appropriated in May 2003, before the MSA was concluded, as part of the Nickel Funding Package, which provided funding for 158 infrastructure-related projects; and (v) preparations for the work on the projects had started prior to the MSA.

7.433 As illustrated by several studies submitted by the United States, Washington State authorities had since the 1990s attempted to address "problems of increasing congestion, decreasing safety, and environmental degradation in the State and local transportation system".[1684] In 1998, the Washington State Governor and Legislature established the Blue Ribbon Commission on Transportation "to: assess the local, regional and state transportation system; ensure that current and future money is spent wisely; make the system more accountable and predictable; and prepare a 20-year plan for funding and investing in the transportation system."[1685] The final report of the Blue Ribbon Commission was published in December 2000. In the introduction to this final report, the Commission observed:

> "Looking ahead twenty years, if nothing changes, the Puget Sound region will experience severe traffic on every major roadway during most of the day. *Congestion will also spread and worsen north and south along the entire length of I-5*, east on I-90 from Seattle to the I-82 junction and on to Yakima. Traffic and delay will also expand along I-90 and U.S. 2 through Spokane, on U.S. 395 to Colville, on U.S. 195 to Pullman and on U.S. 12 between Walla Walla to the Tri-Cities. Critical rail and freight corridors throughout Washington will also be increasingly bogged down, delaying farm products and other goods from reaching our ports.
>
> Perhaps the most sobering realization is that our state has no transportation plan in place today that, if implemented, would come anywhere close to meeting the challenges of the future. While Washington has an extensive and interconnected transportation network, we are not prepared for current and future growth, and our investment as well as the state's economic well being are threatened."[1686]

7.434 The report contained a recommendation to begin with fixing the worst congestion chokepoints in the State, in which context it specifically included as priorities improvements to I-5

[1682] European Communities' first written submission, para. 227.
[1683] European Communities' comments on United States' response to question 128, para. 78.
[1684] United States' first written submission, para. 524.
[1685] The Commission consisted of 46 members representing business, labour, agriculture, tribes, government, ports, shipping, trucking, transit, rail, environmental interests and the general public.
[1686] Transportation Action: Final Recommendation to the Governor and Legislature (December 2000), Exhibit US-215 (emphasis added).

and SR 527.[1687] The Panel has before it other documents that demonstrate that the need to undertake improvements to I-5 and SR 527 had been acknowledged years before the conclusion of the MSA.[1688]

7.435 As evidenced by the Blue Ribbon Commission's final report and by the fact that the I-5 and SR 527 projects were mainly financed from the Nickel Funding Package enacted in May 2003 by the Washington State Legislature, the two projects were conceived as part of a comprehensive, state-wide set of measures that were seen as being necessary to address a general problem of the degradation of Washington's transportation infrastructure. It is also noteworthy in this respect that "{i}mproving transportation was the No.1 recommendation of the Washington Competitiveness Council, which the governor convened in 2001 to further improve the state's business climate".[1689]

7.436 The I-5 and SR-527 expansion projects, like other projects undertaken pursuant to the recommendations of the Blue Ribbon Commission, were designed to address a variety of concerns. The list of Nickel Funding Package projects describes the I-5 expansion project as follows:

> "This section of I-5 experiences congestion and mobility problems due to high traffic volumes and is part of the Puget Sound Core HOVE program. To relieve congestion, increase capacity and mobility, and provide a travel time advantage to transit and HOV traffic, this project will design and construct northbound and southbound HOV lanes on I-5 between SR 526 and US 2 in the city of Everett. Existing I-5 will be widened asymmetrically with both median and outside widening. The Broadway Interchange off-ramp will be moved to the right side to increase safety and reduce congestion. Up to 20 bridges will be widened. Design and construction of several noise walls and retaining walls and a full storm water system retrofit is anticipated. Intelligent Transportation System (ITS) monitoring equipment will be installed. Investigation of the Lowell Road slide area is included."[1690]

7.437 A Washington State Department of Transport website document states:

> "Why is WSDOT widening and improving I-5 between Highway 526 and US 2 in Everett? Thousands of vehicles merging on and off I-5 at Broadway, 41st Street, Pacific Avenue, and Highway 2 and those just passing through create *heavy traffic congestion on I-5 through the city of Everett*. Backups can be severe and increase the chance of accidents.
>
> This project is a step in the right direction *to help fix one of our state's most notorious bottlenecks*. When we complete construction, additional lanes will make more room for more cars on this busy stretch of I-5. Modifying the I-5/41st Street Interchange will help make transitions from the freeway to city streets safer and will get drivers where they want to go quicker and with less frustration. These and other improvements included in this project *will enhance safety, reduce merging, and move traffic more smoothly*."[1691]

[1687] Transportation Action: Final Recommendation to the Governor and legislature (December 2000), Exhibit US-215. The United States also cites other statements by authorities of Washington State regarding the seriousness of traffic congestion problems on the I-5 and /or SR 527. Exhibits US-213, US-216 and US-217.

[1688] See e.g. SR 527 Route Development Plan, Exhibit US-208; State Highway System Plan: 1999-2018, January 1998, Exhibit US-213.

[1689] Gov. Locke Highlights State's Plan to Keep and Grow Boeing jobs; Calls for Swift Action on Transportation-Improvement Package, Exhibit EC-119.

[1690] "Nickel Funding Package" Enacted for Transportation by the 2003 Washington State Legislature, Exhibit EC-123, p.15.

[1691] WSDOT Projects, OI-5 – Everett, SR 526 to US 2 HOV Lanes, Exhibit EC-118 (emphasis added).

7.438 Regarding the SR 527, the Nickel Funding Package projects list states:

> "This project will construct one new lane in each direction with a two-way left-turn lane from 132nd SE to 112th SE *to increase safety and reduce congestion*."[1692]

7.439 In this regard, the Panel notes that while the European Communities cites certain statements as support for its view that the measures were designed to serve Boeing's interests, these statements typically refer to a broader range of interests than just Boeing's interests. For example, the European Communities states that "{i}n urging passage of the 2003 legislative transportation bill, Washington Governor Gary Locke recognized that '{t}he Boeing {787} final assembly operation depends on the smooth movement of parts and sub-assemblies from suppliers to the factory' ".[1693] The document at issue states that:

> "*We must clear up traffic congestion and improve freight mobility*," Locke said. "The Boeing final assembly operation depends on the smooth movement of parts and sub-assemblies from suppliers to the factory. *Our entire state needs these improvements*. I remain confident we can reach a compromise on transportation before the end of this session."[1694]

7.440 The European Communities also asserts that in explaining the decision to accelerate implementation of the I-5 project, Washington State Secretary of Transportation Doug MacDonald stated that the accelerated schedule 'will benefit the Boeing 7E7 Dreamliner Program...' "[1695] In fact, the full statement cited to by the European Communities is: "This project *helps boost Washington's economy* and will benefit the Boeing 7E7 Dreamliner Program *and 2010 Vancouver Olympics tourism*".[1696]

7.441 Finally, the Panel notes that preparations for the work on the I-5 and SR-527 had already started prior to the conclusion of the MSA.[1697]

7.442 In the Panel's view, the fact that the need to undertake the I-5 and SR 527 projects had been acknowledged well before the MSA and that they were undertaken as part of a comprehensive effort of the State of Washington to improve its transportation infrastructure and pursued a variety of safety, environmental and economic objectives means that the European Communities mischaracterizes these projects when it asserts that the projects were designed specifically to benefit Boeing. According to the European Communities, the road improvement measures were "designed to achieve the following: (1) alleviate traffic congestion around Boeing's Everett plant; (2) allow Boeing to accommodate additional heavy-duty truck traffic; and (3) provide sufficient road capacity to handle a substantial increase in employment at the Boeing facility".[1698] This statement may perhaps be pertinent as an explanation of why Boeing was particularly interested in the prompt implementation of the road improvement measures but it is not a factually accurate reflection of the various objectives pursued by these measures. As discussed above, the objectives pursued were considerably broader in nature.

[1692] "Nickel Funding Package" Enacted for Transportation by the 2003 Washington State Legislature, Exhibit EC-123, p.17 (emphasis added).

[1693] European Communities' first written submission, para. 216.

[1694] Gov. Locke Highlights State's Plan to Keep and Grow Boeing jobs; Calls for Swift Action on Transportation-Improvement Package, Exhibit EC-119 (emphasis added).

[1695] European Communities' first written submission, para. 223.

[1696] WSDOT News, WSDOT Fast tracks Everett I-5 Carpool Lane Expansion, Exhibit EC-126 (emphasis added). Similarly, WSDOT stated that "{t}he accelerated schedule will benefit the Boeing 7E7 Dreamliner program, *2010 Vancouver Olympics tourism and all drivers who use I-5 through Everett*." WSDOT projects, I-5 – Everett, SR 526 to US 2 HOV lane, Exhibit EC-118 (emphasis added).

[1697] See e.g. WSDOT Projects: MAP SR 527 Widening 132 St. SE to 112 St,. SE, Exhibit US-206.

[1698] European Communities' first written submission, para. 213.

BCI deleted, as indicated **[***]**

7.443 The Panel emphasizes that it is well aware that Washington State authorities regarded the infrastructure improvement measures provided for in the Nickel Funding Package, including the I-5 and SR 527 projects, as a key element in their strategy to persuade Boeing to establish a 7E7 final assembly facility in Washington State.[1699] Washington State authorities were aware of Boeing's specific infrastructure needs in relation to the 7E7 assembly facility and knew that Boeing had concerns regarding the quality of Washington State's transportation infrastructure.[1700] The proposal made to Boeing by Washington State authorities in June 2003 included "{a} transportation-improvement package that includes a 5-cent-a-gallon gas tax hike to help ease congestion and improve traffic safety across the state".[1701] Washington State authorities made a commitment in the MSA "to undertake and complete all design and construction of all road and road and traffic control-related improvements set forth in Exhibit C-9 pursuant to the terms, conditions and schedule set forth therein".[1702]

7.444 Thus, the Panel does not contest the fact that the road improvements at issue, and more generally the infrastructure improvement projects provided for in the Nickel Funding Package, were an important factor in Boeing's decision to locate what was then referred to as the 7E7 assembly facility in the State of Washington. It is possible that Boeing would have decided to locate its 7E7 assembly facility elsewhere if Washington State had not undertaken these projects.[1703] However, the Panel has also found that the projects were originally designed years before the MSA as part of a comprehensive effort to address a general problem of degradation of Washington State's transportation infrastructure and that they pursued a range of safety, environmental and economic objectives. That Boeing had a special interest in ensuring that these projects would be implemented and that the Washington State authorities provided assurances to Boeing in this regard in the MSA does not alter the fact that these projects were designed to pursue a broad range of interests that went beyond Boeing's particular interest. In this regard, the Panel sees merit in the arguments of the United States that "companies will frequently seek to ensure that certain infrastructure necessary for their operations is in place before undertaking a significant investment" and that "{t}he mere fact that a government promises to build certain infrastructure does not make such infrastructure 'non-general'".[1704] Given that the road improvements were accessible to the general public, were designed to achieve a broad range of safety, environmental and economic objectives and had been conceived years before the conclusion of the MSA, the Panel finds that the existence of a promise to Boeing made by the Washington State authorities in the MSA does not warrant the conclusion that, as argued by the European Communities, the road improvement projects "served Boeing's interest, as opposed to the public interest". In the Panel's view, the European Communities' assertion that "{t}he

[1699] Gov. Locke Highlights State's Plan to Keep and Grow Boeing Jobs; Calls for Swift Action on Transportation-Improvement Package, Exhibit EC-119 ("Gov. Gary Locke today highlighted the state's strategy to keep and grow Boeing jobs in Washington by winning the final assembly of Boeing's next jet, the 7E7. A cornerstone of the governor's strategy is to get a transportation-improvement package passed this legislative session.")

[1700] Gov. Locke Highlights State's Plan to Keep and Grow Boeing Jobs; Calls for Swift Action on Transportation-Improvement Package, Exhibit EC-119 ("Boeing has indicated it will provide a list of issues it would like the state to address to be competitive for winning the 7E7 assembly ... Transportation is also one of Boeing's top concerns.")

[1701] Gov. Locke, Business, Labor and Government Leaders Celebrate Delivery of State's 7E7 Proposal at 'Action Washington' Rally, Exhibit EC-62.

[1702] MSA Art. 6.11.1, Exhibit EC-58.

[1703] In Article 10.6.2 of the MSA, the Public Parties agreed and acknowledged that "Boeing would not have considered locating the Facilities in the State and investing substantial capital and other resources without the Commitments provided by each of them for the entire period for which such Commitments are available."

[1704] United States' response to question 246, para. 414.

Washington State Department of Transportation and the City of Everett undertook these projects as part of an agreement specifically with Boeing, and only Boeing"[1705] is factually incorrect.

7.445 The Panel now proceeds to consider the European Communities' argument that the I-5 and SR 527 expansion projects should be considered to constitute provisions of infrastructure that is not general because of certain specific legal rights conferred on Boeing under the MSA.

7.446 The European Communities asserts, *inter alia*, that under the MSA Boeing enjoys a legal right to define the specifications of the road improvements. The European Communities refers to this right as "a legal right to define the specifications of the publicly-financed road improvements, including those related to the re-routing of private roads", "the sole legal right to define the specifications of the planned infrastructure", and "a right to define the specifications of the publicly-financed road improvements granted solely to Boeing among all other users, including those related to the re-routing of private roads".[1706] The European Communities alleges that "Boeing decides what the DOT will do, and the DOT must comply with Boeing's demands".[1707] It also states that "Boeing and only Boeing (not even the government of the State of Washington), has a legal right to affect the specifications of the two projects at issue in accordance with its current and future needs related to project Olympus."[1708] According to the European Communities, the MSA effectively transfers various legal rights to Boeing, including the right to "dictate" specifications of the road improvements, with the result that "Boeing has replaced the Washington State department of Transport ('DOT') for the particular projects at issue....The role of the DOT has effectively been reduced to that of an entity that simply constructs, finances, services, and maintains the improvements at issue to meet Boeing's requirements".[1709]

7.447 The United States argues that the MSA does not create a legal right that the road improvements will be made according to specifications defined by Boeing and that the European Communities' arguments in this regard rest on an incorrect interpretation of the provisions of the MSA.[1710]

7.448 Article 6.11.1 of the MSA states, in relevant part

> "DOT and the City each shall undertake and complete all design and construction of all road and road and traffic control-related improvements set forth in Exhibit C-9 pursuant to the terms, conditions and schedule set forth therein. Such improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing prior to DOT and the City each seeking of bids or proposals, or letting of contracts, for the construction thereof. All road access improvements shall be designed and constructed in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic meeting the requirements that Boeing has provided to DOT and the City."

[1705] European Communities' first written submission, para. 235.

[1706] European Communities' comments on United States' response to question 38, para. 139; European Communities' response to question 248, para. 446; European Communities' response to question 364, para. 179.

[1707] European Communities' second written submission, para. 141.

[1708] European Communities' second written submission, para. 152.

[1709] European Communities' comments on United States' response to question 128, para. 79 and footnote 103.

[1710] United States' response to panel question 128, paras. 74-75; United States' response to question 246, para. 412; United States' comments on European Communities' response to question 364, para. 185.

BCI deleted, as indicated **[***]**

7.449 The European Communities argues that the sentence "All road access improvements shall be designed and constructed in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic meeting the requirements that Boeing has provided to DOT and the City" means that "the roads at issue must satisfy *both* WTDOT highways standards *and* Boeing's requirements. In other words, Boeing may not impose requirements that conflict with WSDOT standards, but it may design the roads to satisfy its needs within the parameters set by those standards. As such, it is clear that the State *is* making special accommodations for Boeing."[1711] The European Communities argues that Boeing has the sole legal right to define the specifications of the planned infrastructure because the MSA provides that:

> "improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing prior to DOT and the City each seeking bids or proposals …. All road access improvements shall be designed and constructed … meeting the requirements that Boeing has provided to DOT and the City." This includes, *inter alia*, '{a}ll improvements necessary to serve a building or other improvements with public streets or roads and removal of or rerouting any existing private roads presently serving such building or other improvement{s}."[1712]

7.450 The European Communities contends that the United States distorts the meaning of the relevant MSA provisions by asserting that the MSA only requires consultation with Boeing. The European Communities reads the relevant provision as follows:

> "DOT and the City each shall undertake and complete all design and construction of all road and road and {sic} traffic control-related improvements set forth in Exhibit C-9 *pursuant to the terms, conditions and schedule set forth therein*. Such improvements *shall be designed and constructed in accordance with drawings and specifications* in consultation with Boeing prior to DOT and the City each seeking of bids or proposals, or letting of contracts, for the construction thereof. All road access improvements *shall be designed and constructed* in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic *meeting the requirements that Boeing has provided to DOT and the City*."[1713]

7.451 The United States argues that the sentence "All road access improvements shall be designed and constructed in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic meeting the requirements that Boeing has provided to DOT and the City" means that "the road improvements in question were designed and built to pre-existing WSDOT highway standards. The State made no special accommodations for Boeing's truck traffic".[1714] The United States asserts that Arts 6.11.1, 6.12.1 and 6.13.1 of the MSA only "set out a commitment that the public authorities implementing the infrastructure improvements will consult with Boeing in preparing drawings and specifications".[1715] According to the United States, the European Communities "mischaracterizes this commitment to consult as an exclusive legal right for Boeing to have the infrastructure made to its specifications".[1716]

[1711] European Communities' second written submission, para. 141, footnote 220 (emphasis European Communities).

[1712] European Communities' response to question 248, para. 446.

[1713] European Communities' comments on United States' response to question 246, para. 349 (emphasis European Communities).

[1714] United States' first written submission, para. 533, footnote 733.

[1715] United States' response to question 128, para. 74.

[1716] United States' response to question 128, para. 75.

7.452 The Panel is not convinced that the European Communities has demonstrated that the text of Article 6.11.1 of the MSA supports its contention that Boeing "was singled out and given the sole right to define the specifications with which the public authorities must comply"[1717]. First, while the European Communities points out that Article 6.11.1 provides *inter alia* that DOT and the City shall undertake and complete all design and construction of all road and road and traffic control-related improvements set forth in Exhibit C-9 "pursuant to the terms, conditions and schedule set forth in Exhibit C-9", it has not explained how this in and of itself establishes that Boeing will have the right to define specifications according to which the road improvements will be made. The Panel sees nothing in "the terms, conditions and schedule set forth in Exhibit C-9" that confers on Boeing a right to define the specifications of the road improvement projects at issue. Second, the phrase "Such improvements shall be designed and constructed in accordance with drawings and specifications in consultation with Boeing" makes it clear that Boeing has a right to be consulted in respect of those drawings and specifications but cannot reasonably be interpreted to provide a right to Boeing to "define" or "dictate" the specifications. Third, regarding the reference to "requirements that Boeing has provided to DOT and the City", the Panel notes that the European Communities interprets this phrase to mean that "the roads around the Boeing Freeway will 'meet{} the requirements that Boeing has provided to DOT and the City".[1718] The Panel does not believe that this construction is necessarily correct. In the Panel's view, it is perhaps more correct to read this phrase to mean that (i) the road access improvements are to be designed in accordance with the American Association of State Highway Transportation Officials and State standards for heavy-duty truck traffic, and (ii) these standards meet "the requirements that Boeing has provided to DOT and the City." In sum, the Panel considers that the text of Article 6.11.1 of the MSA does not warrant the conclusion that in designing and constructing the road improvements WSDOT and the City of Everett must comply with specifications and standards defined by Boeing. Rather, this text lends more support to the argument of the United States that Boeing's right under Article 6.11.1 is a right to be consulted.

7.453 The Panel also notes that the United States has provided evidence that the I-5 and SR 527 expansion projects corresponded to a variety of considerations and that in the design of these projects a variety of interested parties had been consulted.[1719]

7.454 The Panel now turns to the argument of the European Communities that the MSA provides Boeing with a "performance guarantee" that the publicly financed road improvements will at all times satisfy its current and future needs. The European Communities relies on Exhibit C-9, point 2 of the MSA and Articles 6.11.1 and 6.11.2 as support for this assertion regarding the existence of a performance guarantee. Specifically, the European Communities argues that:

[1717] European Communities' comments on United States' response to question 38, para. 139, footnote 188.

[1718] European Communities' second written submission, para. 141.

[1719] United States' response to question 128, paras. 71-73; I-5 Everett HOV Freeway Expansion Project, Public Outreach Summary, US-Exhibit 1296. The European Communities contends that this list simply shows that the authorities explained one of the projects at various public forums, but does not demonstrate that they actually took into account the interests of entities other than Boeing. While the Panel sees some merit in this argument, the Panel notes that the United States has cited to other documents that in the view of the Panel demonstrate that interests of entities other than Boeing were taken into account in the development of plans for the I-5 and SR 527 projects. The European Communities has declined to address those documents in any detail on the grounds that "{n}one of the other documents referenced by the United States in its response to Question 128 alters the conclusion that the project Olympus MSA gives Boeing significant legal rights unavailable to other users. The European Communities therefore does not comment in detail on any of those documents". European Communities' comments on United States' response to question 128, para. 81. As discussed above, the Panel has found that the MSA does not support the contention of the European Communities that the MSA grants Boeing a legal right not available to other users to define the specifications of the road improvements at issue.

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> "Boeing has a performance guarantee that the road improvements will at all times satisfy its current and future needs: the road improvements 'shall be sufficient to meet road access requirements for the needs of Boeing and its Suppliers to provide sufficient capacity for employment levels up to 83,000 through 2030'; '{t}he City and DOT shall do all things and take all actions necessary to obtain funding for and construction of any new arterial roadways, including any utilities necessary to facilitate future development'; and the '{r}equired {i}mprovements' listed on Exhibit C-9 to the MSA must 'meet … the minimum performance criteria' set forth therein."[1720]

7.455 The Panel considers that there is nothing in the provisions cited by the European Communities to alter the fact that, as discussed above, the road improvement projects at issue were undertaken as part of the Nickel Funding Package, which provided for the funding of a package of 158 infrastructure-related measures as part of a state-wide comprehensive effort to resolve Washington State's infrastructure problems.

7.456 In sum, assuming *arguendo* that the absence of limitations on the availability of the road improvements to the general public is not determinative, and that, as argued by the European Communities, it is necessary to examine other factors in order to determine whether the road improvement projects served a public interest, the Panel finds that the European Communities has not demonstrated that the I-5 and SR 527 expansion projects are not general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

7.457 Apart from the argument that the infrastructure-related measures in the MSA constitute the provision of goods or services other than general infrastructure, the European Communities makes an alternative argument, according to which "{t}he rights under Article 6.11 and Exhibit C-9 of the Project Olympus MSA are a good or service other than general infrastructure, *irrespective of whether the Panel considers the underlying road improvements to be general infrastructure*".[1721] The European Communities advances this argument for the first time in its response to the second set of questions from the Panel.[1722]

7.458 The Panel is not convinced by this argument. First, and as discussed above, the Panel does not agree with the European Communities' characterization of the nature of the rights conferred on Boeing under the MSA. Thus, the text of the MSA does not support the assertions that Boeing enjoys

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[1720] European Communities' response to question 248, para. 446.

[1721] European Communities' response to question 364, para. 184 (emphasis added). See also, European Communities' response to question 364, para. 188 ("In conclusion the 787 Road Improvement Package is a financial contribution pursuant to Article 1.1(a)(1) of the SCM Agreement even if the Panel considers the road improvements to be general infrastructure. This is because the *rights* to those road improvements constitute a provision of goods and services other than general infrastructure pursuant to Article 1.1(a)(1)(iii)." (emphasis original)).

[1722] In explaining its methodology for quantifying the amount of the benefit allegedly conferred by the road improvement projects, the European Communities observes that:

> "(t)he benefit to Boeing from the 787 Road Improvement Package could also be quantified by evaluating the value of the legal right to define specifications according to its sole needs and the performance guarantee provided to Boeing as part of the Package…In fact, the European Communities submits that, should the Panel consider the road improvements themselves constitute general infrastructure, in the alternative, the rights given to Boeing as part of the Package constitute the provision of goods and services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement".

European Communities' response to question 249, para. 454.

"the legal right to define specifications according to its sole needs" and that "the rights guarantee to Boeing the enjoyment of the infrastructure improvements as if there were no other users of the roads".[1723]

7.459 Second, the European Communities' legal argument as to how the rights of the kind allegedly granted under the MSA involve a provision of goods or services in the sense of Article 1.1(a)(1)(iii) of the SCM Agreement is not very convincing. In a footnote to its response to question 249, the European Communities asserts that because the Appellate Body held in *US – Softwood Lumber IV* that by granting the right to harvest timber, Canadian provincial governments were providing goods, "{i}t follows that, by granting the rights at issue in this case, the public authorities provide goods and services to Boeing within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement".[1724] We believe that the Appellate Body's finding in *US – Softwood Lumber IV*, on which the European Communities relies, does not support the European Communities' argument. At issue in *US – Softwood Lumber IV* were stumpage arrangements provided by Canada's provincial stumpage programs, which gave tenure holders a right to enter onto government lands, cut standing timber, and enjoy exclusive rights over the timber that is harvested. Canada argued that the granting of an intangible right to harvest standing timber cannot be equated with the act of providing that standing timber. The Appellate Body disagreed. It found that stumpage arrangements represent a situation in which provincial governments provide standing timber:

> "By granting a right to harvest, the provincial governments put particular stands of timber at the disposal of timber harvesters and allow those enterprises, exclusively, to make use of those resources ... Moreover, what matters, for purposes of determining whether a government 'provides goods' in the sense of Article 1.1(a)(1)(iii), is the consequence of the transaction. Rights over felled trees or logs crystallize as a natural and inevitable consequence of the harvesters' exercise of their harvesting rights. Indeed, as the Panel indicated, the evidence suggests that making available timber is the *raison d'être* of the stumpage arrangements."[1725]

7.460 It was the object of the right that explained why the panel and Appellate Body concluded that the conferral of the right effectively meant the provision of a good. As such, the panel and Appellate Body reports in *US – Softwood Lumber IV* cannot be invoked as support for a more general proposition that by granting any kind of rights to a firm, a government is providing goods and services in the sense of Article 1.1(a)(1)(iii) of the SCM Agreement. In the present case, the European Communities has not demonstrated that the object of the rights allegedly conferred on Boeing, such as the right to be consulted with respect to the specifications of the road improvement projects and the alleged performance guarantee enjoyed by Boeing, is such that by conferring these rights, the relevant authorities effectively provided goods and services in the sense of Article 1.1(a)(1)(iii). It is not clear what "good" or "service" is provided to Boeing as a result of the rights challenged by the European Communities. Notably, it is unclear whether the argument by the European Communities concerns provision of "legal certainty", as the United States understands the European Communities to argue, or provision of some other good, such as provision of infrastructure. If the argument of the European Communities concerns the provision of "legal certainty", the European Communities has not explained how "legal certainty" in and of itself is covered by Article 1.1(a)(1)(iii) of the SCM Agreement.

7.461 In response to the critique of the United States, the European Communities asserts that what it considers to be the performance guarantee enjoyed by Boeing under the MSA means that the authorities of Washington State are required to provide certain services such as planning, scheduling,

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[1723] European Communities' response to question 249, para. 453.
[1724] European Communities' response to question 249, para. 454, footnote 517.
[1725] Appellate Body Report, *US - Softwood Lumber IV*, para. 75 (footnote omitted).

maintenance and construction. However, the European Communities does not demonstrate how these services allegedly provided to Boeing are any different from the work that the Washington State authorities need to undertake to operate the roads as general infrastructure.[1726, 1727]

7.462 For these reasons, the Panel finds that the European Communities has not demonstrated that the I-5 and SR 527 expansion projects or the rights allegedly conferred to Boeing in connection with those projects are financial contributions in the form of provisions of goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

7.463 With respect to whether the Port of Everett improvement measures i.e. the construction of the rail-barge transfer facility and the expansion of the South Terminal are general infrastructure, the Panel notes, first, that the United States has repeatedly asserted in this proceeding that the Port of Everett has not begun work on the expansion of the South Terminal and has no plans to do so. While the European Communities has argued that this is irrelevant, it has not disputed the fact that this expansion of the South Terminal has not (yet) occurred. The Panel fails to see the need to determine whether the expansion of the South Terminal is a measure covered by Article 1.1(a)(1)(iii) of the SCM Agreement when this expansion has not occurred and when there is no certainty that it will occur in future. The expansion of the South Terminal essentially is a measure that does not (yet) exist.[1728]

7.464 Regarding the rail-barge transfer facility, the Panel notes that this project has been undertaken and has been completed. The Panel considers that the evidence before it in support of the assertion by

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[1726] The European Communities provides the following example in order to illustrate the importance of the provision of legal certainty:

> "Suppose that one company receives a binding legal commitment from the authorities of the city in which it is located that provides the company's employees with three rights: (1) the right to ride on a local bus for free; (2) the right to demand that the buses run punctually, regardless of cost; and (3) the right that the bus routes will be selected according to the company's specifications."

European Communities' response to question 364, para. 183. The European Communities also provides an example in support of its argument that under the MSA Washington State "has provided and will provide Boeing rights to past, current and future services":

> "Consider that the State undertakes to ensure an uninterrupted supply of electricity to Boeing's plant. Specifically, the State undertakes to provide electricity from an alternative source of supply based on diesel generators within 10 minutes of the moment the public electricity supply ceases to function (for whatever reason). This contract thus covers the costs of daily maintenance and checking of the diesel generators, as well as the costs of diesel fuel and operation of the engines in case of failure of the public network (all regardless of the cost). Boeing's right to receive these services confers upon it a financial contribution."

European Communities' response to question 364, para. 185. The Panel considers that these examples describe situations that are very different from the road improvement projects at issue in this dispute.

[1727] The Panel notes that the European Communities has not advanced any arguments as to why and how the rights under the MSA, as distinguished from the road improvements themselves, confer a benefit in the sense of Article 1.1(b) of the SCM Agreement and why and how these rights are specific in the sense of Article 2 of the SCM Agreement.

[1728] The Panel notes the argument of the European Communities that the commitment to expand the South Terminal constitutes a financial contribution in the form of a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. Apart from the fact that the European Communities makes this argument in a very summary fashion and provides little reasoning as to why this commitment is a potential direct transfer of funds, the European Communities has failed to show how such a commitment, in and of itself, gives rise to a benefit within the meaning of Article 1.1(b).

the European Communities that this facility is not general infrastructure for purposes of Article 1.1(a)(1)(iii) of the SCM Agreement is considerably stronger than in the case of the road improvement projects.

7.465 First, in the case of the I-5 and SR 527 road improvements it is clear that the improvements are open to the general public and there is nothing that provides Boeing with any special rights that affects the ability of the general public to use the road improvements. In the case of the rail-barge transfer facility, however, Boeing enjoys a right of "Preferential Use". The Amended and Restated Facilities and Services Agreement provides in this respect that:

> "As set forth in Section 4 below, cargos delivered to the Port and destined for delivery to Boeing designated facilities (whether or not owned by Boeing) shall be entitled to Preferential Use of the Facility. The Port has the right to use the new Facility for all other purposes as long as it does not interfere with Boeing's Preferential Use."[1729]

7.466 Article 4.1 of the Amended and Restated Facilities and Services Agreement defines "Preferential Use" as follows:

> "For the purposes of this Agreement, 'Preferential Use' shall mean berthing rights on arrival for vessels and barges and priority space allocated for all cargoes covered by this Agreement in the Port's designated terminal and use of Port's own or its contracted labor and equipment to load or unload Boeing cargo. In exchange, Boeing agrees that it will cause shipments of parts or subassemblies for aircraft bound for Boeing's Everett facilities and that are carried by water in either standard or oversized containers or noncontainerized cargos to be directed through the Port of Everett when Boeing determines, in good faith and in its sole discretion, that such routing is the most cost-effective alternative. The Port agrees that it will grant preferential use at present and future facilities at the Port of Everett to any shipments of parts or subassemblies for any Boeing aircraft (including future models) and that are carried by water in either standard or oversized containers that are bound for a Boeing facility or any Boeing supplier facility designated by Boeing."

7.467 The Panel acknowledges that, as argued by the United States, Boeing's Preferential Use does not preclude the possibility of third parties using the rail-barge transfer facility. At the same time, the Panel notes that the right of other third parties to use the facility is subject to the provision that it may not interfere with Boeing's Preferential Use. This would appear to imply that third parties' access to the rail-barge transfer facility can be restricted. Therefore, a strong argument can be made that if the concept of "general infrastructure" is defined as infrastructure that is available for use by the public without limitations, the "Preferential Use" clause precludes the facility from being considered as general infrastructure.

7.468 Second, the Amended and Restated Facilities and Services Agreement explicitly states that "{t}he Facility is designed to facilitate transport of large components to the Paine Field industrial area, and, particularly, oversized components to the Boeing manufacturing and assembly facilities located there".[1730] Thus, while the road improvement projects served a broad range of objectives, the purpose of the construction of the rail-barge transfer facility is defined much more narrowly as the facilitation of the transport of certain components to Boeing's manufacturing and assembly facilities.

[1729] Port of Everett – Boeing Amended and Restated Facilities and Services Agreement, Art. 3.2, Exhibit US-224.

[1730] Port of Everett – Boeing Amended and Restated Facilities and Services Agreement, Art. 3.1, Exhibit US-224.

BCI deleted, as indicated **[***]**

The Panel finds it significant, in this regard, that a review of the Amended and Restated Facilities and Services Agreement signed by Boeing and the Port of Everett in the fall of 2006, confirms that Boeing agreed to reimburse the Port of Everett for the entire additional costs necessary to complete the rail barge transfer facility at 6 per cent interest over a 20-year amortization schedule.[1731] It is unlikely that the Port of Everett would have succeeded in funding the completion of the project and the construction of the rail-barge transfer facility but for the fact that Boeing agreed to reimburse the entire additional costs necessary to complete the facility.

7.469 The Panel considers that certain arguments of the European Communities are less persuasive. As in the case of the road improvement projects, the Panel is not convinced by the arguments advanced by the European Communities that certain provisions in the MSA, such as those relating to Boeing's right to be consulted, support its view that the rail-barge transfer facility is not general infrastructure. Furthermore, the European Communities has not adequately addressed certain pertinent arguments of the United States, notably the argument that the construction of the rail-barge facility must be seen as part of the railroad network and that the reason for the Port of Everett to undertake the construction of the facility was to avoid having to shut down the main rail line for between one and two hours while large cargo was transferred onto rail barges.

7.470 Nevertheless, while not completely convinced by all arguments made by the European Communities, the Panel considers that, especially in the light of the provisions regarding Boeing's "Preferential Use", that a strong case can be made that the rail-barge transfer facility is not general infrastructure for purposes of Article 1.1(a)(1)(iii) of the SCM Agreement. In the light of its finding below with respect to the existence of a benefit, the Panel does not find it necessary to decide this issue definitively.

7.471 As an alternative argument in support of its contention that the infrastructure-related measures referred to in the MSA are financial contributions, the European Communities submits that these measures involve potential direct transfers of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. The European Communities claims to find support for the characterization of the measures as potential direct transfers of funds in the "Make Whole" provision in 10. 4.1 of the MSA which require that Boeing be provided with "a remedy of equivalent economic effect".

7.472 The Panel does not consider it necessary to examine this alternative argument of the European Communities. This is because, as explained below[1732], assuming that the measures can be considered to be potential direct transfers of funds, the European Communities has not explained how these measures confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

7.473 For these reasons, the Panel finds that: (i) the European Communities has not demonstrated that the I-5 and SR 527 expansion projects and the expansion of the South Terminal are financial contributions within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement; (ii) while the European Communities has a stronger case with respect to the construction of a rail-barge transfer facility by the Port of Everett, it is not necessary to decide definitively whether this measure constitutes a provision of goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii); and (iii) it is not necessary to examine the argument submitted by the European Communities in the alternative that the measures at issue constitute potential direct transfers of funds within the meaning of Article 1.1(a)(1)(i).

7.474 The Panel now proceeds to consider whether, assuming that the construction of the rail-barge transfer facility by the Port of Everett is a financial contribution within the meaning of

[1731] Port of Everett-Boeing Amended and Restated Facilities and Services Agreement, Exhibit C, Exhibit US-224.

[1732] See below, para. 7.480.

Article 1.1(a)(1)(iii)[1733], this financial contribution confers a benefit within the meaning of Article 1.1(b).[1734]

7.475 It is well established that a financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement if the terms of the financial contribution are more favourable than the terms available to the recipient in the market.[1735] Thus, an analysis of the existence and nature of a benefit must focus on the terms of a transaction. In the case of a financial contribution of the type identified in Article 1.1(a)(1)(iii) i.e. a provision of goods or services other than general infrastructure, Article 14(d) of the SCM Agreement, which is relevant context for the interpretation of the term "benefit" in Article 1.1(b)[1736], provides more specific guidance as to how the terms of a transaction must be analyzed for purposes of Article 1.1(b). A determination of the existence of a benefit in accordance with Article 14(d) with respect to a provision of goods or services other than general infrastructure requires an analysis of the adequacy of the remuneration received by the government for the good or service at issue in relation to prevailing market conditions for the good or service in question in the country of provision.[1737]

7.476 The construction and use of the rail-barge transfer facility was the subject of an agreement concluded between the Port of Everett and Boeing in the fall of 2006.[1738] The European Communities does not demonstrate, based on a detailed analysis of the specific provisions of this Agreement, that the Port of Everett did not receive adequate remuneration in connection with the rail-barge transfer facility. The European Communities asserts that the key fact in relation to the existence of a benefit is that "{a}bsent the State funding, Boeing would have been required to pay the entire $30 million cost for this type of specific infrastructure, not just the $14-$16 million cost overrun. It is this $15 million funded by the State that is a benefit to Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement".[1739] Therefore, the European Communities essentially argues that a benefit exists because the State of Washington provides Boeing with a good and requires Boeing to cover only a part of the costs incurred by the State in constructing that facility. The European Communities considers in this respect that the construction of the rail-barge transfer facility "can be viewed as undertaken by Boeing with the Port contributing $16 million in funds".[1740] Under this approach, the benefit is the investment that public authorities make in the construction of infrastructure that Boeing would otherwise have had to finance itself. The European Communities argues more generally in

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[1733] See above, para. 7.470.

[1734] The question of whether the I-5 and SR 527 expansion projects and the expansion of the South Terminal confer a benefit within the meaning of Article 1.1(b) does not arise because, as explained above, (i) the I-5 and SR 527 expansion projects are not financial contributions because they constitute the provision of general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement; and (ii) the expansion of the South Terminal has not occurred, which means that the measure alleged to constitute a financial contribution does not exist.

[1735] See above, para. 7.30.

[1736] Appellate Body Report, *Canada – Aircraft*, paras. 155 and 158; Panel Report, *US – Softwood Lumber III*, para. 7.5.

[1737] According to Article 14(d):

> "the provision of goods or services or purchase of goods by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration, or the purchase is made for more than adequate remuneration. The adequacy of remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale)."

[1738] Port of Everett – Boeing Amended and Restated Facilities and Services Agreement, Exhibit US-224.

[1739] European Communities' second written submission, para. 181.

[1740] European Communities' response to question 249, para. 456.

relation to infrastructure that the investments made by the Washington State authorities serve as a proxy for the market value of the infrastructure at issue.[1741]

7.477 The Panel considers that this approach to determining the existence of a benefit by attributing the totality of the costs of the construction of the rail-barge transfer facility as a benefit to Boeing is problematic. The methodology used by the European Communities might be reasonable where the provision of the infrastructure involves a transfer of title to ownership or the conferral of an exclusive right to use the infrastructure to a particular firm. However, the evidence before the Panel shows that the rail-barge transfer facility is owned by the Port of Everett and that, while Boeing enjoys a right of Preferential Use, it has no right of exclusive use of the facility. The Panel sees no logical basis for the view that the amount of the benefit to Boeing conferred by the provision of the rail-barge transfer facility is the amount of the investment made by the Port of Everett when Boeing does not own the facility and when there are other users of the facility.[1742] In the Panel's view, the European Communities is incorrect when it asserts that the construction of the rail-barge facility "can be viewed as undertaken by Boeing with the Port contributing $16 million in funds".[1743] Rather the construction was undertaken by the Port of Everett with Boeing contributing $15.5 million. Contrary to the argument of the European Communities, the Panel considers that this payment is an element of remuneration paid by Boeing and that the European Communities has not provided sufficient factual and legal reasoning for the Panel to be able to conclude that, in the light of this payment and other terms of the transaction at issue[1744], the Port of Everett has not received adequate remuneration for the goods or services allegedly provided to Boeing.

7.478 The Panel also notes that the United States asserts that Boeing does not actually use the rail-barge transfer facility as it has shifted to air shipments of parts for the 787 and that the European Communities has not disputed this assertion. The European Communities has not explained how the financial contribution provided by the Port of Everett in relation to the rail-barge transfer facility confers a benefit within the meaning of Article 1.1(b) to Boeing when Boeing does not actually use this facility. Thus, it is unclear on what basis it is possible for the European Communities to argue that a benefit within the meaning of Article 1.1(b) exists on the grounds that the Port of Everett improvements "relate explicitly to the production of the 787" when Boeing does not use the rail-barge transfer facility for shipments of 787 parts.

7.479 For these reasons, the Panel considers that with regard to the rail-barge transfer facility the European Communities has not provided sufficient factual and legal reasoning on the existence of a benefit, as that term is used in Article 1.1(b) of the SCM Agreement, interpreted in the light of Article 14(d). In particular, the European Communities has not explained why the Port of Everett has

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[1741] European Communities' response to question 249, para. 450.

[1742] The Panel notes that the European Communities applies the same approach to the determination of the existence of benefit in the case of the Washington State road improvement measures and the expansion of the South terminal. Thus, with respect to the road improvement measures, it treats the amount of $291.2 million invested by the State of Washington in the road improvement projects in the period FY2004-FY2008 as a benefit to Boeing on the grounds that "{i}t is reasonable to conclude that Boeing would have had to pay these same amounts if it were to finance these road improvements, which are beneficial for the operation of Boeing's facilities, itself. Since the State is paying for these road improvements, and Boeing is paying nothing in return, the entire $291.2 million is a benefit conferred upon Boeing". European Communities' response to question 249, para. 452. The Panel sees no rational basis for allocating to Boeing the entirety of the costs incurred by Washington State for the road improvement projects when use of the road improvements is in no way limited to Boeing.

[1743] European Communities' response to question 249, para. 456.

[1744] As set forth in particular in the Port of Everett – Boeing Amended and Restated Facilities and Services Agreement. Exhibit US-224.

received less than adequate remuneration for the goods or services provided to Boeing.[1745] The Panel therefore finds that, assuming that the construction of the rail-barge transfer facility by the Port of Everett is a financial contribution in the form of a provision of goods or services other than general infrastructure, the European Communities has not demonstrated that the construction of the rail-barge transfer facility by the Port of Everett confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

7.480 The Panel also finds that the European Communities has not demonstrated the existence of a benefit in respect of its alternative argument that the infrastructure-related measures referred to in the MSA constitute financial contributions in the form of potential direct transfers of funds. As discussed elsewhere in this Report, in relation to the arguments of the European Communities regarding certain tax measures contained in HB 2294[1746], the Panel considers that, assuming that the provisions of the MSA relied upon by the European Communities could be interpreted to give rise to financial contributions in the form of potential direct transfers of funds, the European Communities has not provided any reasoning to explain why such potential direct transfers of funds confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement. Merely demonstrating that the government has promised to provide either a direct transfer of funds or some other remedy should it default on its MSA commitments is not sufficient to prove that the promise *per se*, rather than the remedy that may eventually be provided, confers a benefit to Boeing. The same reasoning applies to the argument of the European Communities that the Panel should find that the infrastructure-related measures in the MSA constitute potential direct transfers funds as a result of the operation of the "Make Whole" provision in Article 10.4.1 of the MSA. Assuming *arguendo* that the effect of the "Make Whole" provision gives rise to a potential direct transfer of funds in relation to the infrastructure-related commitments in the MSA, the European Communities has not shown that these potential direct transfers of funds provide a benefit in the sense of Article 1.1(b) of the SCM Agreement.

Conclusion

7.481 **For these reasons, the Panel finds that the European Communities has not demonstrated that the I-5 and SR 527 expansion projects, the construction of a rail-barge transfer facility and the expansion of the South Terminal by the Port of Everett are subsidies within the meaning of Article 1 of the SCM Agreement.**

(iii) Waiver of landing fees for Boeing's 747 Large Cargo Freighters at Paine Field

Introduction

7.482 The European Communities argues that the MSA requires Snohomish County to waive landing fees at Paine Field for the 747 LCF and that this constitutes a specific subsidy. The European Communities estimates that the amount of the subsidy to Boeing's LCA division is $13.1 million over the period 2007-2024.

7.483 The United States argues that there is no subsidy because the alleged waiver of landing fees is not a financial contribution and does not confer a benefit.

[1745] The Panel also notes that the European Communities advances arguments that are not germane to the issue of benefit. Whether or not "{t}he time and effort saved by transporting parts from the Port to Paine Field as a result of this rail-barge transfer facility will be an immense benefit to Boeing" is not relevant to the analysis of the existence of a benefit in the sense of Article 1.1(b) of the SCM Agreement.

[1746] See above, paras. 7.173-7.177.

BCI deleted, as indicated **[***]**

The measure at issue

7.484 The Boeing 747 Large Cargo Freighter ("the 747 LCF") is constructed by Boeing by modifying old 747-400s so that they include an aft fuselage that opens up to allow loading and unloading of the 787's large composite structures. The 747 LCF also includes a hinged tail section that opens to allow loading of parts and a redesigned cargo deck.[1747] Boeing uses the 747 LCF to fly several 787 parts to Everett from suppliers within its global supplier network.[1748] In particular, the 747 LCF is used to transport, among other components, the 787 fuselage sections, wing boxes and horizontal stabilizers from Japan, Europe and South Carolina.[1749] The modifications to construct the 747 LCF occur in Chinese Taipei.[1750] According to the European Communities, to date, transport of 787 components is the only projected use for the 747 LCF. In fact, Boeing has named the 747 LCF the "Dreamlifter".[1751] The European Communities asserts that Boeing will exclusively use 747 LCFs to transport large completed sections of the 787 to Everett for final assembly and that Boeing plans to utilize three 747 LCFs for the production of the 787, with the first 747 LCF having entered into service in 2007.[1752]

7.485 Paine Field is the Snohomish County Airport in the City of Everett, where Boeing decided to locate its 787 assembly facility.[1753] Paine Field has a "standard landing fee" based on landed weight and number of landings. Paine Field's standard landing fee for aircraft weighing over 30,000 lbs is $1.00 per 1,000 pounds maximum gross landing weight.[1754] In the mid-1990s, Snohomish County and Boeing agreed that Boeing would pay a "capped annual fee", which escalates by a set amount each year to account for inflation, for Boeing's use of Paine Field runway and airfield facilities.[1755] The parties have referred to this agreement as the "1996 Joint Use Agreement". Thus, Boeing pays Snohomish County an annual "flat fee", as opposed to the standard landing fee on "per-plane" i.e. landing-by-landing basis. In this sense, "per-plane" landing fees are "waived".[1756] The agreement between Boeing and the County has a sunset clause, so the parties periodically negotiate extensions.[1757]

7.486 Exhibit E to the MSA states that "Snohomish County agrees to *modify* the existing Boeing agreement to *include* waiving of all landing fees for 747-400 LCF aircraft".[1758] Thus, pursuant to the MSA, any per-plane landing fees that would otherwise be paid in respect of 747-400 LCF aircraft are "waived", and are instead included in and covered by the "flat fee" agreement between Boeing and Snohomish County. It is this measure that the European Communities terms the "waiver of landing

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[1747] Boeing 787: Build globally, assemble locally, The Seattle Times, 11 September 2005, Exhibit EC-115, p. 4.

[1748] European Communities' first written submission, para. 189 and Dominic Gates, Boeing 787: Parts from around world will be swiftly integrated, The Seattle Times, 11 September 2005, Exhibit EC-114.

[1749] Boeing 787: Build globally, assemble locally, The Seattle Times, 11 September 2005, Exhibit EC-115, p. 4.

[1750] Boeing 787: Build globally, assemble locally, The Seattle Times, 11 September 2005, Exhibit EC-115, p. 4.

[1751] European Communities' first written submission, para. 189.

[1752] European Communities' first written submission, para. 240.

[1753] European Communities' first written submission, para. 239.

[1754] European Communities' first written submission, para. 244; United States' first written submission, para. 565.

[1755] United States' first written submission, para. 560; 1996 Boeing-Paine Field Joint Use Agreement, 10 April 1996, Exhibit EC-1189.

[1756] United States' first written submission, para. 561.

[1757] United States' first written submission, para. 562.

[1758] First Amendment to Project Olympus Master Site Agreement, Exhibit E, Exhibit EC-60 (emphasis added).

fees for Boeing's 747 large cargo freighters at Paine Field", and which the European Communities challenges as a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement.

Arguments of the European Communities

7.487 The primary argument of the European Communities regarding the existence of a financial contribution is that Snohomish County's agreement to waive landing fees for the 747 LCFs amounts to: (i) a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement because the County foregoes revenue that it would otherwise receive; and (ii) a financial contribution within the meaning of Article 1.1(a)(1)(iii) because by allowing the 747 LCFs to land at Paine Field and use its facilities the County provides services for free.[1759] In the alternative, the European Communities submits that the measure gives rise to a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) because under Article 10.4.1 of the MSA Snohomish County must provide Boeing with a remedy of equivalent effect if it cannot provide the 747 LCF landing fee waiver.[1760]

7.488 The European Communities argues that Snohomish County's commitment to waive landing fees for the 747 LCFs contained in the MSA involves the foregoing of revenue that would otherwise be due and is therefore a financial contribution within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement. In this regard, the European Communities rejects the argument of the United States that the County is not foregoing any revenue otherwise due because, based on its Joint Use Agreement for Paine Field, Boeing pays a capped annual fee for landing of all Boeing aircraft. The European Communities accepts that at the time Snohomish County and Boeing signed the MSA they had a capped annual fee agreement with respect to landings at Paine Field. However, the European Communities argues that that agreement did not, and could not, have related to the 747 LCF because the 1996 Joint Use Agreement, which established the capped fee, was not a comprehensive agreement encompassing landings by all Boeing civil aircraft and because neither the Joint Use Agreement, nor any other agreement that pre-dated the MSA included the 747 LCF.[1761]

7.489 The European Communities argues that the Joint Use Agreement[1762] was an interim agreement reached by the parties to resolve a dispute over fees pursuant to an earlier agreement. Specifically, the Agreement addressed the fees owed by Boeing to Paine Field from 1994 through 1998, and committed the parties to attempt negotiation of a more comprehensive agreement by the end of 1998. Nowhere in the Agreement does it say that it relates to the landing of all Boeing civil aircraft at Paine Field.[1763] Because Boeing and Snohomish County did not reach a comprehensive agreement regarding Boeing's use of Paine Field by the end of 1998, they instead signed extension letters dated 25 August 1999[1764], 7 December 2000[1765], 17 December 2002[1766], and 7 March 2007[1767] to periodically extend the temporary capped annual fee arrangement set up by the 1996 Joint Use Agreement. These subsequent extension agreements support the view that the 1996 Joint Use Agreement did not relate to landings by all Boeing civil aircraft at Paine Field, as it was not until the 17 December 2002 extension letter that the parties decided to add a clause stating: "this agreement

[1759] European Communities' first written submission, para. 242.
[1760] European Communities' first written submission, para. 243.
[1761] European Communities' second written submission, paras. 161-164.
[1762] 1996 Boeing-Paine Field Joint Use Agreement, Exhibit EC-1189.
[1763] European Communities' second written submission, para. 161.
[1764] Boeing-Paine Field Joint Use Agreement Extension, 25 August 1999, Exhibit EC-1190.
[1765] Boeing-Paine Field Joint Use Agreement Extension, 7 December 2000, Exhibit EC-1191.
[1766] Boeing-Paine Field Joint Use Agreement Extension, 17 December 2002, Exhibit US-234 (BCI).
[1767] Boeing-Paine Field Joint Use Agreement Extension, 7 March 2007, Exhibit US-235 (BCI).

includes the introduction, testing and production of additional aircraft models with no additional cost to Boeing".[1768]

7.490 The European Communities argues that had the 1996 Joint Use Agreement already covered fees with respect to all Boeing civil aircraft, there would have been no need to add this clause in the 17 December 2002 extension letter.[1769] The European Communities also submits that in view of the fact that Snohomish County "agree{d} to modify the existing Boeing agreement to include waiving of all landing fees for 747-400 LCF aircraft" in the MSA[1770] and that Snohomish County actually implemented this commitment in its 7 March 2007 extension letter with a clause separate from the one added on 17 December 2002, it is evident that the clause added in the 17 December 2002 extension letter did not encompass the 747 LCF. The clause in question in the extension letter of 7 March 2007 reads:

> "Under this extension of the Joint Use Agreement, Boeing is authorized to produce current and additional aircraft models and derivatives with no additional charges for use of the airfield for takeoff and landing for test, evaluation and delivery flights. *Additionally, pursuant to the Project Olympus Agreement there will be no additional fees or low fuel flowage charges for 747 Large Cargo Freighter (LCF) operations during flight test or cargo operations."*[1771]

7.491 The European Communities asserts that 747 LCF would not be considered an "additional aircraft model" that fits within the scope of the clause added in the 17 December 2002 extension letter because the 747 LCF is not like Boeing's other LCA models, which are sold in the commercial marketplace. Rather, it is a cargo aircraft designed to assist Boeing in the production of the 787. Thus, the European Communities rejects the United States' interpretation that the 'waiver' referenced in the MSA merely reflects existing practice, under which in exchange for a flat fee, all per-plane fees are waived. To accept this reading would render both the 747 LCF waiver clause in the MSA and the clause implementing the waiver in the 7 March 2007 extension letter meaningless.[1772] It would also make the commitment by Snohomish County in the MSA to provide a landing fee waiver for the 747 LCF unnecessary.[1773]

7.492 In its comments on the United States' response to a Panel question, the European Communities reiterates[1774] its position that neither the 1996 Joint Use Agreement nor the 17 December 2002 extension letter related to landings by all Boeing civil aircraft at Paine Field.[1775] The European Communities further submits that the failure by the United States to explain the contradictions discussed by the European Communities confirms the view that the 747 LCF was not within the scope of the December 2002 extension of the 1996 Joint Use Agreement. Therefore, the waiver of 747 LCF landing fees, as required by the MSA and implemented by the March 2007 extension of the Joint Use Agreement, results in the foregoing of revenue otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.[1776]

7.493 To demonstrate that Snohomish County has given up a real entitlement to collect additional revenue, the European Communities compares the contested measure with a normative benchmark.

[1768] European Communities second written submission, para. 162.
[1769] European Communities second written submission, para. 163.
[1770] First Amendment to Project Olympus Master Site Agreement, Exhibit E, Exhibit EC-60.
[1771] Boeing-Paine Field Joint Use Agreement Extension, 7 March 2007, Exhibit US-235 (BCI) (emphasis European Communities).
[1772] European Communities second written submission, para. 163.
[1773] European Communities second written submission, para. 164.
[1774] European Communities' Comments on United States' response to question 366 (b), paras. 181-183.
[1775] European Communities' second written submission, paras. 160-169.
[1776] European Communities' Comments on United States' reponse to question 366 (b).

Since the capped annual fee arrangement did not encompass the 747 LCF, 747 LCF landings at Paine Field would have been subject to Paine Field's standard landing fee schedule, which is $1.00 per 1,000 pounds maximum gross landing weight. The European Communities estimates in view of this standard schedule, that absent the waiver agreed to in the MSA and implemented in the 7 March 2007 extension letter, Paine Field would be entitled to collect $1.00 per 1,000 pounds maximum gross landing weight with respect to each 747 LCF landing at Paine Field, in addition to the capped annual fee that relates to landings by other Boeing aircraft. As such, it follows that Snohomish County is foregoing revenue otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.[1777]

7.494 The European Communities submits that the waiver of landing fees for the 747 LCF also gives rise to a financial contribution within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1778] Specifically, Snohomish County is providing services to Boeing by allowing the 747 LCF to land at Paine Field at no cost, resulting in a financial contribution within the meaning of Article 1.1(a)(1)(iii). The United States' assertion that there is no provision of free services to Boeing because the waiver in the MSA is part of the fee paid by Boeing is factually incorrect.[1779]

7.495 The European Communities argues, in the alternative, that because Snohomish County committed to providing Boeing with a landing fee waiver for the 747 LCF through the MSA, the commitment is guaranteed to Boeing through the "Make Whole" provision of the MSA, resulting in a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.[1780]

7.496 The European Communities argues that the 747 LCF landing fee waiver confers "benefits" on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because the waiver relates explicitly to the production of the 787 and is provided to Boeing's LCA division on non-market terms. Because Boeing is not required to pay anything in return for the waiver and the 747 LCFs will all be used to transport 787 parts to Everett for final assembly, the entirety of the financial contributions can be considered to confer benefits on Boeing's LCA division. The advantage conferred on Boeing's LCA division by this 747 LCF landing fee waiver is provided on non-market terms. The landing fee waiver for 747 LCF results in Boeing paying less in transportation costs for the parts needed to put together each 787. By definition, the landing fee waiver is not available to Boeing on the market and can be provided to Boeing only by Snohomish County, which allows the 747 LCFs to use the services of Paine Field at no cost – i.e. less than market value.[1781]

[1777] European Communities' second written submission, paras 165-166. In its first written submission, the European Communities explains as follows how it has derived the amount of the subsidy resulting from the waiver of landing fees:

> "The European Communities estimates this financial contribution to be worth at least $13.1 million from FY 2007 to FY 2024. According to Paine Field, their standard landing fee for aircraft weighing over 30,000 lbs is $1.00 per 1,000 lbs maximum gross landed weight (MGLW). Although the technical specifications for the 747 LCF are not yet available, using the MGLW of 666,000 lbs for the 747-400F as a proxy, the fee waiver works out to $666 per landing. If each of the three 747 LCFs lands at Paine Field once every day (i.e. 365 times per year), the Project Olympus Master Site Agreement will require Paine Field to forego $729,270 in revenue from landing fees each year beginning in FY 2007, or $13.1 million from FY 2007 to FY 2024."
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> European Communities' first written submission, para. 244.

[1778] European Communities first written submission, paras. 242-243.
[1779] European Communities' second written submission, para. 169.
[1780] European Communities' second written submission, para. 169.
[1781] European Communities' first written submission, para. 248.

BCI deleted, as indicated **[***]**

7.497 The European Communities rejects the United States' argument that under the fixed annual fee arrangement, Boeing effectively pays a higher rate than the airport's standard fee for LCA based on landed weight and number of landings. The fixed annual fee arrangement is irrelevant to the 747 LCF. The European Communities maintains that Boeing's fixed annual fee arrangement for the use of Paine Field did not, and could not, have covered the 747 LCF before the waiver agreed to by Snohomish County in the MSA and implemented in the 7 March 2007 extension letter. Therefore, Boeing would have owed Paine Field's standard rate of $1.00 per 1,000 pounds maximum gross landing weight with respect to landings of the 747 LCF. The waiver, however, provides that the 747 LCF will not be subject to any separate fees, and as such deviates from what a market participant would be required to pay for such landings at Paine Field. This results in a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the value of which is at least $13.1 million from 2007 through 2024.[1782]

Arguments of the United States

7.498 The United States observes that in the mid-1990s Snohomish County and Boeing agreed that Boeing would pay a capped annual fee, which escalates $60,000 per year to account for inflation and covers Boeing's use of Paine Field runway and airfield facilities. This agreement encompassed landings by all Boeing civil aircraft, including the 747 LCF. While Snohomish County agreed in the MSA to modify the existing Boeing agreement to include waiving of all landing fees for 747-400 LCF aircraft, this "waiver" merely reflects existing practice, under which in exchange for a flat fee, all per-plane fees are waived.[1783]

7.499 The United States explains that because the Joint Use Agreement contains a sunset clause, the parties periodically negotiate extensions. In December 2002, Boeing and Paine Field extended their Joint Use Agreement from 2003 to 2005. The December 2002 extension, which predated the MSA, specifically stated that the Agreement "include{d} the introduction, testing, and production of additional aircraft models with no additional cost to Boeing".[1784] The United States observes that another extension of the Joint Use Agreement occurred on March 7, 2007, which provides that Boeing is authorized to produce current and additional aircraft models and derivatives with no additional charges for use of the airfield for takeoff and landing for test, evaluation and delivery flights and that, pursuant to the MSA, there will be no additional fees or low fuel flowage charges for 747 LCF operations during flight test or cargo operations.[1785] The United States argues that the 747 LCF is a Boeing aircraft, and as such, was covered by the original agreement. The December 2002 extension of the Boeing and Paine Field Joint Use Agreement provided further clarification that the waiver of landing fees included additional aircraft models with no additional cost to Boeing. Consistent with the original agreement and the December 2002 extension, the March 2007 extension of the Joint Use Agreement, repeats the pre-existing agreement that the 747 LCF would not be subject to additional

[1782] European Communities' second written submission, paras. 170-171. The European Communities also argues that "it also makes no sense that Boeing would agree to pay a higher rate than Paine Field's standard landing fees". The European Communities questions Exhibit US-237, Boeing Landing Summary and Costs at Paine Field, (BCI), on which the United States relies for its assertion that Boeing is paying more than Paine Field's standard rates, as lacking underlying source information. European Communities' second written submission, para. 170, footnote 297.

[1783] United States' first written submission, paras. 560-561.

[1784] United States' first written submission, para. 562. The United States argues that, contrary to the argument of the European Communities, this extension did not "modify" the Joint Use Agreement to include operations with respect to additional aircraft models. United States' response to question 366(b), para. 208, footnote 251.

[1785] United States' first written submission, para. 563. This March 2007 extension also provides that for the years 2007, 2008, 2009, 2010, and 2011, Boeing's total billing will be the lesser of the amount due under the 1995 Formula (Addendum A) or the "Capped Amount." The "Capped Amount" is **[***]** for year 2007, **[***]** for 2008, **[***]** for 2009, **[***]** for 2010, and **[***]** for 2011. United States' first written submission, para. 563.

landing fees. Accordingly, the original agreement between Boeing and the County established that the 747 LCF would not be subject to per-plane landing fees. The December 2002 and March 2007 extensions and the relevant MSA provision merely reflect existing practice as established in the original agreement.[1786]

7.500 The United States argues that based on the capped annual fee for landing of all Boeing aircraft agreed to by Boeing and Snohomish County and Paine Field, as well as the March 2007 amendment to the Joint Use Agreement, it is clear that the County is not forgoing any revenue that it would otherwise collect for landing of the 747 LCF.[1787] The United States also argues that there is no provision of free services to Boeing because the "waiver" in the MSA is part of the fee paid by Boeing. As such, there is no financial contribution.[1788] The United States argues that there is no benefit to Boeing because under the fixed annual fee arrangement, Boeing effectively pays a higher rate than the airport's standard fee for LCA based on landed weight and number of landings.[1789]

Evaluation by the Panel

7.501 The issue before the Panel is whether what the European Communities characterizes as a commitment made by Snohomish County in the MSA to waive landing fees for the 747 LCF is a subsidy within the meaning of Article 1 of the SCM Agreement. The European Communities argues that Snohomish County's commitment in the MSA to waive landing fees for the 747 LCF constitutes the foregoing of government revenue otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement and a provision of goods or services within the meaning of Article 1.1(a)(1)(iii). The European Communities argues that these financial contributions confer a benefit upon Boeing within the meaning of Article 1.1(b) of the SCM Agreement. The United States contends that the County is not foregoing any revenue that would otherwise be due for 747 LCF landings because Boeing pays the "capped annual fee for landing of all Boeing aircraft" based on its Joint Use Agreement for Paine Field, which pre-dates the MSA. The United States also argues that there is no provision of services to Boeing at no cost. The United States further argues that if there is a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement, there is no benefit within the meaning of Article 1.1(b).

7.502 The Panel explains below why it considers that the European Communities has not demonstrated that the commitment made by Snohomish County in the MSA to waive landing fees for the 747 LCF constitutes a subsidy within the meaning of Article 1 of the SCM Agreement. It is important to note at the outset that even if the Panel had found this measure to be a subsidy, the Panel would have found that this measure is not relevant to its analysis of the European Communities' claim

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[1786] United States' response to question 366(b), paras. 208-209. More generally, the United States explains that the MSA reflects an effort by Washington State and Boeing to address, in a comprehensive manner, a range of factors relevant to Boeing's operations in Washington State. For some of those factors, such as the 747 LCF landing fees, Boeing and the State had already established a practice that was satisfactory to both parties and that did not require changes. Because Boeing had been conducting operations in Washington State for many years prior to the MSA, Washington State and Boeing merely sought to memorialize existing practice in the MSA. That is what happened with regard to the 747 LCF landing fees. Therefore, the United States submits that the European Communities continues to read obligations and benefits into the MSA that just are not there. United States' response to question 366, para. 200.

[1787] United States' first written submission, para. 564.

[1788] United States' first written submission, para. 564.

[1789] United States' first written submission, para. 565. The United States submits that in 2006, Boeing paid $**[***]** million under its contract for landing fees, which is equivalent to $**[***]** per 1,000 lbs maximum gross landing weight landed during that year. This is higher than what Boeing would have been charged had it paid the airport's standard landing fee. Based on Boeing's 2006 maximum gross landing weight of 201,156,892, it would have paid a total of $201,157 in landing fees under standard rates, compared to its $**[***]** million pursuant to the contract. United States' first written submission, para. 565.

of serious prejudice. The Panel needs to address the question of whether this measure is a subsidy for the purposes of assessing the European Communities' claim of serious prejudice. The total amount of subsidization which the European Communities alleges to exist in this dispute includes both "past amounts" and "future amounts", where "past" and "future" refer to, respectively, 1989-2006 and 2007-2024.[1790] As indicated in the serious prejudice section of this Report, the Panel considers it appropriate to assess the European Communities' present serious prejudice claim by examining the effects of the subsidies over the period 2004-2006.[1791] In the case of the waiver of the landing fees for the 747 LCFs, the amount of the alleged subsidy pertains entirely to the post-2006 period. According to the European Communities, the amount of this subsidy is $0 in the period 1989-2006 and $13.1 million in the period 2007-2024.[1792] As discussed elsewhere in this Report[1793], the European Communities has explained that the only post-2006 amounts of subsidies that are relevant to its claim of present serious prejudice are the amounts of certain recurring subsidies that reduce Boeing's marginal unit costs, including the waiver of the 747 LCF landing fees, expected to be received in the years 2007, 2008 and 2009.[1794] However, these subsidy amounts expected to be received in the post-2006 period play no part in the Panel's analysis of the European Communities' present serious prejudice claim.[1795] Moreover, the Panel exercises judicial economy with regard to threat of serious prejudice.[1796] Therefore, even if the Panel found that the alleged waiver of landing fees in respect of the 747 LCF constitutes a specific subsidy, the Panel would not take the amount of this subsidy into account in its analysis of the European Communities' claim of serious prejudice.

7.503 The Panel now proceeds to set forth the reasons for its finding that the European Communities has not demonstrated that the measure at issue constitutes a subsidy within the meaning of Article 1 of the SCM Agreement.

7.504 The Panel notes, in this regard, that the parties have advanced extensive arguments on the factual question of whether, prior to conclusion of the MSA, the capped annual landing fee agreed upon between Boeing and the Snohomish County applied to the 747 LCF. In this regard, the European Communities asserts that the capped annual fee provided for in the pre-MSA flat fee agreement did not apply to the 747 LCF. The United States asserts that the waiver of landing fees provided for in the pre-MSA flat fee agreement[1797] already applied to 747 LCF, and that the MSA simply memorialises this existing practice.

7.505 We consider that the evidence submitted by the European Communities supports its contention concerning the scope of the pre-MSA flat fee agreement. Among other things, it is not clear to us why the MSA would single out and make specific reference to 747 LCF if the pre-MSA flat fee agreement already covered all Boeing aircraft, including the 747 LCF. In addition, we recall that the MSA required Snohomish County "to *modify* the existing Boeing agreement to include

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[1790] See e.g. Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17.

[1791] See below, paras. 7.1676-7.1679.

[1792] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17.

[1793] See above, para. 7.155.

[1794] European Communities' response to question 372. The European Communities treats the alleged waiver of the landing fees for the 747 LCF as a subsidy that reduces Boeing's marginal costs of production of the 787. European Communities' first written submission, para.1230, Figure 15.

[1795] See below, para. 7.1813.

[1796] See below, paras. 7.1851-7.1853.

[1797] As explained above, this agreement, which the parties refer to as the "1996 Joint Use Agreement", has been the subject of a number of extensions. For the sake of simplicity and ease of understanding, we refer to the pre-MSA agreement and extensions as the "pre-MSA flat fee agreement", and the post-MSA agreement/extension as the "post-MSA flat fee agreement".

waiving of all landing fees for 747-400 LCF aircraft" in the MSA.[1798] We also note that a 7 March 2007 extension letter provides:

> "Under this extension of the Joint Use Agreement, Boeing is authorized to produce current and additional aircraft models and derivatives with no additional charges for use of the airfield for takeoff and landing for test, evaluation and delivery flights. Additionally, *pursuant to the Project Olympus Agreement* there will be no additional fees or low fuel flowage charges for 747 Large Cargo Freighter (LCF) operations during flight test or cargo operations."[1799]

7.506 Thus, we believe that the European Communities has demonstrated that the effect of the MSA was to modify and extend the scope of the pre-MSA flat-fee agreement to "include" 747 LCF landings.

7.507 However, we do not agree with the European Communities that it follows from this that there is a subsidy within the meaning of Article 1 of the SCM Agreement. In our view, the only conclusion that follows from this is that Boeing was able to renegotiate its flat fee arrangement with Snohomish County as part of the MSA, just as Boeing and Snohomish County had on previous occasions renegotiated the terms of that flat fee arrangement.[1800] In other words, the only conclusion we draw from this is that the pre-MSA flat fee agreement did not cover or "include" landing fees for 747 LCF, and that the post-MSA flat fee agreement now covers and includes 747 LCF landing fees.

7.508 To establish that this modification of the pre-MSA agreement gives rise to a subsidy within the meaning of Article 1 of the SCM Agreement, we believe that the European Communities must at minimum provide some kind of comparison between the terms of the post-MSA agreement with the 'standard landing fee' collected from other users of Paine Field. The European Communities has not done so. Rather, it appears to us that what the European Communities has effectively done is to use the pre-MSA flat fee agreement between Boeing and Snohomish County as the benchmark, both for the purpose of attempting to demonstrate that the post-MSA flat fee agreement involves a foregoing of government revenue otherwise due within the meaning of Article 1.1(a)(1)(ii), and for the purpose of attempting to establish the existence of a benefit within the meaning of Article 1.1(b). However, we have difficulty with such an analysis.

7.509 With respect to the foregoing of government revenue otherwise due, we recall the Appellate Body's clarification that:

> "{T}he word 'foregone' suggests that the government has given up an entitlement to raise revenue that it could otherwise have raised. This cannot, however, be an entitlement in the abstract, because governments, in theory, could tax *all* revenues. There must, therefore, be some defined normative benchmark against which a

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[1798] First Amendment to Project Olympus Master Site Agreement, Exhibit E, Exhibit EC-60 (emphasis added).

[1799] Boeing-Paine Field Joint Use Agreement Extension, 7 March 2007, Exhibit US-235 (BCI), Paragraph 2 (emphasis added).

[1800] For example, it appears that in a 2002 extension letter, parties decided to add a clause stating: "this agreement includes the introduction, testing and production of additional aircraft models with no additional cost to Boeing." See European Communities' comments on United States' response to question 366(b), para. 181, comparing Boeing-Paine Field Joint Use Agreement Extension, 17 December 2002, Exhibit US-234 (BCI) *with* Boeing-Paine Field Joint Use Agreement Extension, 25 August 1999, Exhibit EC-1190 *and* Boeing-Paine Field Joint Use Agreement Extension, 7 December 2000, Exhibit EC-1191.

> comparison can be made between the revenue actually raised and the revenue that would have been raised 'otherwise'…"[1801]

7.510 We do not see how Boeing's pre-MSA flat fee agreement with Snohomish County can be treated as a "defined, normative benchmark" for the purpose of determining whether Snohomish County is foregoing revenue otherwise due under the post-MSA flat fee agreement.

7.511 Assuming *arguendo* that Paine Field provides goods or services to Boeing within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement under this arrangement[1802], we encounter the same basic difficulty in ascertaining whether the post-MSA flat fee agreement confers a benefit within the meaning of Article 1.1(b). More specifically, assuming that the agreements involve a provision of goods or services within the meaning of Article 1.1(a)(1)(iii), then Article 14(d) provides for a comparison with "prevailing market conditions":

> "the provision of goods or services or purchase of goods by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration, or the purchase is made for more than adequate remuneration. The adequacy of remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale)."

7.512 Again, we do not believe that the pre-MSA flat fee agreement can be used as the benchmark in this regard. Rather, we consider that the standard landing fee collected from other users of Paine Field must serve as the benchmark, both for the purpose of Articles 1.1(a)(1)(ii), 1.1(b) and 14(d) of the SCM Agreement. We consider that the European Communities must demonstrate, by reference to that benchmark, that the terms of the post-MSA flat fee agreement between Boeing and Snohomish County provide a subsidy within the meaning of Article 1.

7.513 To be clear, we do not accept at face value the United States' assertion that "under the fixed annual fee arrangement, Boeing effectively pays a ***higher*** rate than the airport's standard fee for LCA based on landed weight and number of landings."[1803] In this regard, we take note of the European Communities' observation that Exhibit US-237[1804], on which the United States relies for that assertion, lacks any underlying source information.[1805] Rather, the difficulty is that there is no information before the Panel that would enable us to engage in a comparison of the terms of the post-MSA flat fee agreement with Paine Field's standard landing fee. Rather, the information before us essentially comes down the following:

(a) Paine Field has a standard landing fee based on landed weight and number of landings. Paine Field's standard landing fee for aircraft weighing over 30,000 lbs is $1.00 per 1,000 pounds maximum gross landing weight.[1806]

(b) Under its post-MSA flat fee agreement with Snohomish County, the annual fee that Boeing pays is **[***]** for year 2007, **[***]** for 2008, **[***]** for 2009, and **[***]** for

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[1801] Appellate Body Report, *US - FSC*, paras. 90-91 (emphasis original).

[1802] We note that the United States does not argue that the "goods or services" provided to Boeing by Paine Field are general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

[1803] United States first written submission, para. 565 (emphasis added).

[1804] Boeing Landing Summary and Costs at Paine Field, Exhibit US-237 (BCI).

[1805] European Communities second written submission, para. 170.

[1806] European Communities' first written submission, para. 244; United States' first written submission, para. 565.

BCI deleted, as indicated **[***]**

2010, and **[***]** for 2011.[1807] This flat fee agreement now includes and covers the costs of LCF landings, whereas previously it did not.

7.514 This information suggests to us that the post-MSA flat fee agreement between Boeing and Snohomish County is more favourable to Boeing than the pre-MSA flat fee agreement between these parties. However, this information does not suffice to establish the existence of a subsidy. The European Communities, as the complaining party, carries the burden of demonstrating that the measures it challenges constitute subsidies within the meaning of Article 1 of the SCM Agreement. In order to demonstrate that the post-MSA flat fee arrangement with Boeing constitutes a subsidy, it is not sufficient for the European Communities to demonstrate (as we believe it has) that the post-MSA flat fee agreement modified the pre-MSA flat fee agreement to include LCF landings within its scope. The reason is that the pre-MSA flat fee agreement between Boeing and Snohomish County cannot serve as a benchmark for the Article 1 analysis. Rather, the appropriate benchmark is the standard landing fee charged by Paine Field to other users. The European Communities must provide some kind of comparison between (a) and (b) above, i.e. some kind of a comparison of Boeing's post-MSA flat fee agreement with the 'standard landing fee' charged by Paine Field to other users. The European Communities has not done so.[1808] Accordingly, we do not believe that the European Communities has carried its burden of demonstrating the existence of a subsidy.

7.515 For the same reasons as expressed in relation to the Washington HB 2294 taxation measures and the MSA infrastructure-related measures, the Panel considers that the European Communities has not made out its argument in the alternative, namely that the waiver of landing fees, as a result of the operation of the Make Whole Provision in Article 10.4.1 of the MSA, constitutes a subsidy in the form of a potential direct transfer of funds that confers a benefit.[1809]

Conclusion

7.516 **For these reasons, the Panel finds that the European Communities has not demonstrated that Snohomish County's "waiver of 747 LCF landing fees at Paine Field" is a subsidy within the meaning of Article 1 of the SCM Agreement.**

(iv) City of Everett and Snohomish County: rates for water, sanitary sewer, solid waste, and process wastewater services

Introduction

7.517 The European Communities alleges that the City of Everett and Snohomish County have made commitments in the MSA to "indefinitely freeze" the rates charged to Boeing for certain utility services at the levels applicable at the time of the conclusion of the MSA in 2003. The European Communities contends that the City of Everett made such commitments with regard to water service, sanitary sewer service and process wastewater treatment facilities and that Snohomish County made such a commitment with regard to solid waste disposal services.[1810] The European Communities argues that this freezing of the rates of these utility services charged to Boeing gives rise to specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement and that the amount of these subsidies to Boeing's LCA division is at least $16.5 million over the period 2004-2024.

[1807] United States' first written submission, para. 563; Boeing-Paine Field Joint Use Agreement (7 March 2007), Exhibit US-235 (BCI).

[1808] We note that this is an altogether different kind of analysis from that which the European Communities provides at paragraph 244 of its first written submission, and at paragraphs 165-167 of its second written submission. See above, footnote 1777.

[1809] See above, paras. 7.159-7.167 and paras. 7.173-7.178.

[1810] European Communities' first written submission, para. 271.

BCI deleted, as indicated **[***]**

7.518 The United States argues that the European Communities misunderstands the relevant provisions of the MSA and that no specific subsidy exists because Boeing pays the same rates for utility services as other commercial, industrial and government customers.

The measures at issue

7.519 With respect to water service, the MSA provides in relevant part:

> "6.3.1 {…} The City shall negotiate a water contract with Boeing that would fix water rates at their present levels for an agreed period of time".[1811] …
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> "6.3.2 The City covenants, represents and warrants to Boeing that: {...} (d) the aggregate rates and fees charged for water service to the Facilities Site shall not exceed the amounts set forth in Exhibit C-1".[1812]

Exhibit C-1 provides that "{m}unicipal Water is provided to the site for an average rate of $0.65 per 1,000 gallons"[1813] and that the "{m}aximum Aggregate Rates and Fees" are set at the "Applicable regulated tariff rate".[1814]

7.520 With regard to sanitary sewer service and process wastewater service, the MSA provides in relevant part:

> "6.4.2 The City further represents, covenants and warrants to Boeing that: {...} "the aggregate rates and fees charged for sanitary sewer and/or POTW service to the Facilities Site shall not exceed the amounts set forth in Exhibit C-2".[1815]
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> "6.6.2 The City covenants, represents and warrants to Boeing that: {...} the aggregate rates and fees charged for waste water treatment in connection with Project Olympus shall not exceed the amounts set forth in Exhibit C-4".[1816]

Exhibit C-2 provides that "{t}he project will be served by municipal sewer line at the average rate of $4.18 per 1,000 gallons per day"[1817] and that the "{m}aximum Aggregate Rates and Fees" are set at the "Applicable regulated tariff rate".[1818]

7.521 With regard to solid waste disposal services, the MSA provides in relevant part:

[1811] MSA, Art. 6.3.1, Exhibit EC-58.

[1812] MSA, Art. 6.3.2, Exhibit EC-58.

[1813] MSA, Exhibit C-1, para. 1 and Exhibit EC-59. The European Communities notes that this converts to $0.486 per 100 cubic feet. The European Communities asserts that the rate applicable to Boeing is essentially equal to the City of Everett's 2003 rate of $0.485 per 100 cubic feet for water consumed in excess of 15,000 cubic feet – i.e. Boeing's marginal rate of water given the large volumes of water that Boeing consumes. In this context, the European Communities explains that because the City has a tiered rate structure for the first 15,000 cubic feet of water consumed, "it makes sense that Boeing's average rate would be slightly higher than its marginal rate". European Communities' first written submission, para. 272, footnote 423.

[1814] MSA Exhibit C-1, para. 6, Exhibits to the MSA, Exhibit EC-59.

[1815] MSA, Art. 6.4.2, Exhibit EC-58.

[1816] MSA, Art. 6.6.2, Exhibit EC-58.

[1817] MSA Exhibit C-2, para. 1 and Exhibit C-4, para. 1, Exhibits to the MSA, Exhibit EC-59. The European Communities notes that this converts to $3.127 per 100 cubic feet and that this rate is essentially equal to the City of Everett's 2003 rate of $3.128 per 100 cubic feet for sewer services. European Communities' first written submission, para. 272, footnote 424.

[1818] Exhibit C-2, para. 6 and Exhibit C-4, para. 6, Exhibits to the MSA, Exhibit EC-59.

> "The aggregate rates and fees charged for solid waste disposal in connection with Project Olympus shall not exceed the amounts set forth in Exhibit C-3".[1819]

Exhibit C-3 provides that "{t}he County provides solid waste disposal services utilizing the solid waste transfer facility located at Paine Field Airport and Roosevelt landfill in Klickitat County. The Current tipping fee is $89 per ton and the transportation charge is $85 per 10-ton container".[1820] It also states that the "{m}aximum Aggregate Rates and Fees" are set at the "Applicable regulated tariff rate".[1821]

Arguments of the European Communities

7.522 The primary argument of the European Communities regarding the existence of a financial contribution is that by freezing the rates charged to Boeing for certain utility services the City of Everett and Snohomish County are foregoing revenue that is otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement.[1822] In the alternative, the European Communities argues that the measures at issue can be considered to constitute a guarantee against future utility rate increases for which Boeing does not have to pay any premium, thus amounting to a potential direct transfer of funds pursuant to Article 1.1(a)(1)(i). The European Communities also asserts that the fact that Washington State must provide Boeing with a remedy of equivalent economic effect if it cannot provide the utility rate freezes themselves, further demonstrates that a potential direct transfer of funds exists within the meaning of Article 1.1(a)(1)(i). [1823]

7.523 The European Communities submits that the MSA commits the City of Everett and Snohomish County to freeze rates for utility services at their 2003 levels because the expression "{a}pplicable regulated tariff rate" in the relevant Exhibits to the MSA refers to the rate applicable as of 19 December 2003, i.e. the date of the MSA.[1824] The European Communities argues that this commitment constitutes revenue foregone that would otherwise be due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement because the City of Everett and Snohomish County forego revenue that they would otherwise collect from Boeing when they raise rates for these services in the future for entities other than Boeing, as they must to keep pace with inflation, rising costs, etc. The European Communities notes that the relevant normative benchmarks for the Article 1.1(a)(1)(ii) analysis are the prevailing utility rates set by local ordinance.[1825] A comparison of the rates frozen at their 2003 levels with these normative benchmarks[1826] illustrates that revenue is foregone that would otherwise be due.[1827]

7.524 The European Communities contends that the amount of the financial contribution provided by the measures at issue can be estimated to be $16.5 million from 2004 through 2024.[1828]

[1819] Art. 6.5.2, MSA, Exhibit EC-58.
[1820] MSA Exhibit C-3, para. 1, Exhibits to the MSA, Exhibit EC-59.
[1821] MSA Exhibit C-3, para. 6, Exhibits to the MSA, Exhibit EC-59.
[1822] European Communities' first written submission, para. 274.
[1823] European Communities' first written submission, para. 275.
[1824] European Communities' first written submission, para. 272.
[1825] European Communities' second written submission, para. 199, footnote 354. Specifically, for water rates, Everett Ordinance 2805-04, Exhibit EC-150; and for sewer rates, Everett Ordinance 2804-04, Exhibit EC-153.
[1826] Estimates of City of Everett Water/Sewer Subsidies to Boeing, Exhibit EC-22.
[1827] European Communities' second written submission, para. 199, footnote 354.
[1828] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17; Estimates of City of Everett Water/Sewer Subsidies to Boeing, Exhibit EC-22; State and Local Subsidies to Boeing LCA Division, Exhibit EC-27. The European Communities explains that it bases this estimate on public records received from the City of Everett regarding its water and sewer rates and Boeing's historical consumption of these services. City of

BCI deleted, as indicated **[***]**

7.525 The European Communities rejects the argument of the United States that the MSA simply requires Boeing to pay the utility rates set by ordinance. The MSA provides that "the aggregate rates and fees charged" to Boeing with respect to water, sewer, solid waste, and wastewater services shall not exceed the "{a}pplicable regulated tariff rate{s}", which must mean the rates in place as of 19 December 2003 – the date of the MSA. In addition, the European Communities emphasizes the fact that with respect to water rates, the MSA specifically provides that the City of Everett "shall negotiate a water contract with Boeing that would fix water rates at their present level for an agreed period of time". To read the MSA provisions in question as requiring Boeing to simply pay the utility rates set by ordinance would read them out of existence because absent some other arrangement, Boeing would be required to pay the utility rates set by ordinance.[1829]

7.526 The European Communities submits that the United States' argument that Washington State prohibits the City of Everett and Snohomish County from charging Boeing preferential rates is both incorrect and impertinent. While the United States relies on a provision of the Revised Code of Washington that rates for water, sewer, and solid waste services "must be uniform for the same class of customers or service", the same sections of the Revised Code of Washington, allow localities "in {their} discretion" to consider several factors when establishing rates for different classes of customers, including the quantity of the service required and, importantly, "any other matters which present a reasonable difference as a ground for distinction".[1830] In the light of the sheer size of its operation, Boeing is by far the largest consumer of utility services in the City of Everett and Snohomish County. Thus, Washington State law allows the City and County to factor Boeing's importance into account when setting its utility rates.[1831]

7.527 The European Communities submits that even assuming that Washington State law somehow prevents the City and County from charging Boeing preferential rates, this does not change the fact that the commitment to freeze Boeing's utility rates in the MSA results in a financial contribution. Since the City of Everett and Snohomish County made this commitment in the MSA, it is guaranteed to Boeing through the "Make Whole" provision of that Agreement.[1832] The European Communities also argues that the United States fails to provide any evidence in support of its argument that Boeing actually pays the same utility rates as other industrial customers. Moreover, even if Boeing has paid the same utility rates as other industrial customers so far, it has an enforceable right under the MSA to seek refunds for any amounts it has paid in excess of what it would owe at 2003 rates.[1833] The European Communities submits that its understanding of the existence of a utility rate freeze for Boeing is confirmed by a press release from a public policy research organization in Washington State.[1834]

7.528 In its comments on a response of the United States to a Panel question, the European Communities asserts that the United States continues to read the relevant provisions of the MSA out

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Everett Utility Rate FOIA Response, Exhibit EC-154. The European Communities also notes that this estimate does not take into account the impact of the solid waste rate freeze, because Snohomish County failed to provide any information regarding Boeing's consumption of solid waste services that could serve as the basis for an estimate. Snohomish County Solid Waste FOIA Response, Exhibit EC-155; Summary of Denials to Requests for Government Information, Exhibit EC-28, p.6.

[1829] European Communities' second written submission, paras. 193-194.

[1830] Wash. Rev. Code § 35.92.010, Exhibit US-231; Wash. Rev. Code § 35.92.020(2), Exhibit US-232; Wash. Rev. Code § 35.67.020(2), Exhibit US-233.

[1831] European Communities' second written submission, para. 195.

[1832] European Communities' second written submission, para. 196.

[1833] European Communities' second written submission, para. 198; European Communities' comments on United States' response to question 366, para. 177.

[1834] European Communities' comments on United States' response to question 145, para. 140, referring to Details of Boeing Agreement Revealed, Evergreen Freedom Foundation Press Release, 21 January 2004, Exhibit EC-56.

of existence, in contravention of Washington State's contract law. The MSA states that "the aggregate rates and fees" charged for a particular type of service "shall not exceed the amounts set forth" in certain Exhibits and these Exhibits explicitly set forth specific amounts of the rates charged for the services at issue. Moreover, the Exhibits provide that the maximum aggregate rates and fees are the applicable regulated tariff rate. That the phrase "applicable regulated tariff rate" has no specific temporal connotation, as argued by the United States, is irrelevant because the temporal connotation arises out of the statement that Boeing's rates "shall not exceed" certain specified amounts.[1835] To read the provisions of the MSA to simply mean that the "legal regime that pre-dated the MSA...continues to apply"[1836] and that "{t}he MSA merely confirms that utility rates, as set regularly by local regulations, apply to Boeing's operations"[1837] is to read them out of existence.[1838]

7.529 The European Communities argues that the utility rate freezes by the City of Everett and Snohomish County confer "benefits" on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because they relate explicitly to the production of commercial aircraft and are provided to Boeing's LCA division on non-market terms.[1839] The benefit from these utility rate freezes is the difference between the frozen rates for Boeing and any increased rates the City charges other Everett entities in the future.[1840]

7.530 The European Communities argues that the utility rate freezes are specific within the meaning of Article 2.1(a) of the SCM Agreement because the rate freezes are part of an agreement specifically between Boeing and the City of Everett and Snohomish County and because the MSA provides that the City and County will freeze the rates for these utility services only for Boeing.[1841] In the alternative, the European Communities argues that the utility rate freezes are specific under Article 2.1(c) of the SCM Agreement because the MSA makes it clear that they will extend only to Boeing and the history of "The Boeing Incentive Package" demonstrates that the rate freezes are intended to directly benefit Boeing's LCA production.[1842]

Arguments of the United States

7.531 The United States argues that the European Communities erroneously asserts that the State of Washington has provided a WTO-inconsistent subsidy to Boeing by freezing the rates that it must pay for certain utilities. The United States submits that the European Communities fundamentally misunderstands the provisions of the MSA and that Boeing pays the same rates as other commercial, industrial, and government customers.[1843] The MSA states that the "Maximum Aggregate Rates and Fees" for the utilities at issue will be the "applicable regulated tariff rate."[1844] However, the "applicable regulated tariff rate" is set by ordinance. Water rates are currently set by Ordinance 2805-04, sewer rates are set by Ordinance 2804-04, and solid waste rates are set by Ordinance 2753-04.[1845]

[1835] European Communities' comments on United States' response to question 366, paras. 172-173. With regard to water services, the European Communities argues that the temporal connotation also follows from the provision in the MSA that requires the City of Everett to "negotiate a water contract with Boeing that would fix water rates at their present level for an agreed period of time". European Communities' comments on United States' response to question 266, para. 173, footnote 321.

[1836] United States' response to question 366, para. 200.

[1837] United States' response to question 366, para. 201.

[1838] European Communities' comments on United States' response to question 366, para. 175.

[1839] European Communities' first written submission, para. 281.

[1840] European Communities' first written submission, para. 279.

[1841] European Communities' first written submission, para. 282.

[1842] European Communities' first written submission, para. 283.

[1843] United States' first written submission, para. 554.

[1844] MSA Exhibits C-1, C-2, C-3, and C-4, Exhibits to the MSA, Exhibit EC-59.

[1845] City of Everett Water Ordinance 2805-04, Exhibit US-227; City of Everett Sewer Ordinance 2804-04 Exhibit US-228; and City of Everett Solid Waste Ordinance 2753-04, Exhibit US-229.

As such, the law requires Boeing to pay the same rates for the utilities at issue as all customers defined as "Commercial/Industrial/Governmental" by city ordinance, which includes all City of Everett retail customers other than residential customers. Moreover, these rates have increased for water, sewer, wastewater, and solid waste disposal since the signing of the MSA in 2003[1846] and Boeing is subject to those higher rates. Thus, the European Communities has no basis for alleging that the City of Everett and Snohomish County's utility rates confer a subsidy on Boeing.[1847] The United States also points out that charging Boeing a preferential rate would be a violation of Washington State law, which requires that no utility rate be charged "that is less than the cost of the water and service to the class of customers served".[1848]

7.532 The United States argues that while the MSA does not provide a definition of "applicable regulated tariff rate" as it relates to utilities, if interpreted in the light of the ordinary meaning of the terms in that phrase, it is clear that this phrase reflects a dynamic concept and in no way precludes changes to the utility rate over time. The MSA merely confirms that utility rates, as set regularly by local regulations, apply to Boeing's operations.[1849] In addition, the United States posits that under Washington State law, since the MSA does not contain a definition of "applicable regulated tariff rate," an interpretation of this phrase would be governed by the plain meaning of the words contained in the phrase. The plain meaning of "applicable" is "able to be applied (*to* a purpose etc.); having reference, relevant".[1850] The term does not have specific temporal connotation, and, by its ordinary meaning, in no way precludes the possibility of periodic adjustments to the rate that is applicable.[1851] Consistent with this plain meaning, Washington State understood the "applicable" rate in this context to be a dynamic concept in the sense that the applicable rate may be periodically adjusted. The United States rejects the European Communities' contention that "applicable" rate must be the rate in effect at the time of the MSA without the possibility of adjustments because this reading is inconsistent with Washington State's understanding of this provision and finds no support in the text of the MSA.[1852]

7.533 The United States submits that further review of the terms "regulated", "tariff", and "rate" also confirms this. The plain meaning of "regulate" is to "control, govern, or direct by rule or regulations; subject to guidance or restriction; adapt to circumstances or surroundings".[1853] Thus, something that is regulated is subject to control, governance or direction by rule or regulations, and is subject to guidance or restriction.[1854] Additionally, "tariff" is defined as "a table or scale of fixed charges made by a private or public business, as a list of prices for a hotel, a schedule of rates payable for a public utility, etc."[1855] and "rate" is defined as "the price paid or charged for a thing or class of things; *esp*. an amount paid or charged for a certain quantity of a commodity, work, etc.; a fixed or assigned price, charge, or value."[1856] The United States argues that none of these terms has the temporal connotation that the European Communities suggests.[1857]

7.534 Finally, the United States asserts that it has adduced considerable evidence demonstrating that the European Communities' contention that Washington State committed in the MSA to freeze Boeing's utility rates at the rates that were in effect at the time of the MSA is inaccurate and finds no

[1846] Everett Utilities Rate Tables for 2004, 2006, and 2007, Exhibit US-230.
[1847] United States' first written submission, para. 555.
[1848] United States' first written submission, para. 556.
[1849] United States' response to question 366(a), para. 201.
[1850] *New Shorter Oxford English Dictionary*, p. 99.
[1851] United States' response to question 366(a), para. 202.
[1852] United States' response to question 366(a), para. 203.
[1853] *New Shorter Oxford English Dictionary*, p. 2530.
[1854] United States' response to question 366(a), para. 204.
[1855] *New Shorter Oxford English Dictionary*, p. 3222.
[1856] *New Shorter Oxford English Dictionary*, p. 2481.
[1857] United States' response to question 366(a), para. 205.

support in the text of the MSA.[1858] The fact that the rates paid by Boeing for water, filtration, and sewer, in fact, increased from 2004 to 2007 demonstrates that Washington State made no such commitment to freeze Boeing's rates.[1859]

7.535 The United States asserts that the measures at issue confer no benefit on Boeing as Boeing is not receiving utilities at less than market rates paid by all users. The United States also argues that the utility rates that Boeing pays are not specific within the meaning of Article 2.1(a) of the SCM Agreement because the "applicable regulated tariff rate" is the same rate charged to other commercial, industrial and government customers. Moreover, Washington State law requires that utility rates be non-discriminatory between customers and classes of customers that are similarly situated. The United States also considers that the utility rates are not specific by operation of Article 2.1(b) because the rates are established by ordinance, for which objective criteria exist.[1860]

Evaluation by the Panel

7.536 The European Communities argues that the City of Everett and Snohomish County made a commitment in the MSA to freeze the rates charged to Boeing for certain utility services at the levels applicable at the time of the conclusion of the MSA. The question before the Panel is whether this alleged measure constitutes a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement.

7.537 Before proceeding to examine whether the European Communities has demonstrated that a specific subsidy exists within the meaning of Articles 1 and 2 of the SCM Agreement, the Panel notes that the significance of this alleged subsidy within the overall context of the European Communities' claim of serious prejudice is very limited. The Panel needs to address the question of whether this measure is a subsidy for the purposes of assessing the European Communities' claim of serious prejudice. The total amount of subsidization which the European Communities alleges to exist in this dispute includes both "past amounts" and "future amounts", where "past" and "future" refer to, respectively, 1989-2006 and 2007-2024.[1861] As indicated in the serious prejudice section of this Report, the Panel considers it appropriate to assess the European Communities' present serious prejudice claim by examining the effects of the subsidies over the period 2004-2006.[1862] While the European Communities estimates that the amount of the subsidy to Boeing's LCA division resulting from the alleged freeze of utility rates is $16.5 million over the period 2004-2024, most of this amount pertains to the post-2006 period. According to the European Communities, the amount of this subsidy in 2004-2006 is $0.4 million whereas the amount of this subsidy in the period 2007-2024 is $16.1 million.[1863] Thus, the figure of $16.5 million consists almost entirely of amounts of subsidy in the period post-2006. As discussed elsewhere in this Report[1864], the European Communities has explained that the only post-2006 amounts of subsidies that are relevant to its claim of present serious prejudice are the amounts of certain recurring subsidies that reduce Boeing's marginal unit costs.[1865] The European Communities treats the freezing of the utility rates as a subsidy that increases Boeing's non-operating cash flow, rather than as a subsidy that reduces Boeing's marginal unit costs.[1866] Therefore, it would appear that the post-2006 amounts of subsidy from the freezing of utility rates simply do not play any role in the European Communities' claim of present serious prejudice. In its

[1858] United States' response to question 366(a), para. 206.
[1859] United States' response to question 366(a), para. 207.
[1860] United States' first written submission, paras. 557-558.
[1861] See e.g. Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17.
[1862] See below, paras. 7.1676-7.1679.
[1863] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17; Estimates of City of Everett Water/Sewer Subsidies to Boeing, Exhibit EC-22.
[1864] See above, para. 7.155.
[1865] European Communities' response to question 372.
[1866] European Communities' first written submission, para. 1230, Figure 15.

own analysis of present serious prejudice, the Panel also does not rely on any subsidy amounts relating to the post-2006 period. Moreover, the Panel exercises judicial economy in relation to threat of serious prejudice.[1867] The Panel therefore considers that it is necessary to make a finding with regard to whether the freezing of the utility rates constitutes a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement only in respect of the period 2004-2006. The European Communities estimates that the amount of the alleged subsidy in this period is $0.4 million.

7.538 With regard to whether the alleged freezing of the utility rates has given rise to a specific subsidy in the period 2004-2006, the Panel finds, based on the evidence before it, that the European Communities has not demonstrated that the City of Everett and Snohomish County made a commitment in the MSA to freeze the rates charged to Boeing for the use of certain utility services at the levels applicable at the time of the conclusion of the MSA.

7.539 First, the MSA does not say that the City of Everett and Snohomish County made a commitment not to increase rates of utility services consumed by Boeing beyond the level applicable at the time of the conclusion of the MSA. Rather, the MSA obliges Boeing to pay "the applicable regulated tariff rate". The Panel considers that the phrase "applicable regulated tariff rate" in Exhibits C-1, C-2 and C-4 of the MSA should be given its ordinary meaning, i.e. the rate that may be adjusted from time to time rather than a rate that is fixed at a certain level.

7.540 Second, the context of these terms does not support the European Communities' reading of the MSA. While the European Communities relies *inter alia* on a statement in Article 6.3.1 of the MSA that "{t}he City shall negotiate a water contract with Boeing that would fix water rates at their present level for an agreed period of time", this statement actually contradicts the argument of the European Communities that the City of Everett made a commitment in the MSA not to increase the rates of certain utility services above the level applicable in 2003. If, as argued by the European Communities, certain statements in the MSA[1868] create an obligation upon the City to "freeze indefinitely" the rates at the levels applicable at the time of the conclusion of the MSA, it is hard to understand why the MSA provides for the negotiation of a water contract "that would fix water rates at their present level for an agreed period of time". This sentence shows that the parties intended that the issue of the fixing of water rates at their present level for an agreed period of time would be the subject of a contract to be negotiated by the City of Everett and Boeing.[1869] Moreover, this sentence is preceded by a sentence stating that "{t}he City expects rate stability for the foreseeable future". If the City had actually made a legal commitment to freeze the rates of utility services at the level applicable in 2003, the statement that it "expects rate stability in the foreseeable future" would be irrelevant.

7.541 Third, the Panel considers that the evidence before it reveals that the rates charged to Boeing by the City of Everett and Snohomish County for the use of certain utility services have actually increased since 2003. With regard to water service, Exhibit C-1 to the MSA provides that "{m}unicipal Water is provided to the site for an average rate of $0.65 per 1,000 gallons", which according to the European Communities converts to $0.486 per 100 cubic feet. The Panel has before it evidence regarding Boeing's water consumption and payments made by Boeing for water service in the period 2000-2006.[1870] Based on this evidence, it is possible to calculate a per unit rate paid by Boeing for water services by dividing the total amount of payments made by Boeing by the amount of

[1867] See below, paras. 7.1851-7.1853.

[1868] The relevant statements are that "the aggregate rates and fees charged" for certain utility services "shall not exceed the amounts set forth in" the Exhibits to the MSA and that the "maximum aggregate rates and fees" shall be the "applicable regulated tariff rate".

[1869] The European Communities has not shown that such a contract has actually been concluded.

[1870] This evidence consists of data provided by the City of Everett to the European Communities pursuant to a Freedom of Information Act Request. City of Everett Utility Rate FOIA Response, Exhibit EC-154.

Boeing's water consumption. This calculation shows that the rate paid by Boeing per 100 cubic feet of water consumed in 2006 was clearly higher than the rate mentioned in the MSA. With regard to sanitary sewer service and process wastewater service, Exhibit C-2 to the MSA provides that "{t}he project will be served by municipal sewer line at the average rate of $4.18 per 1,000 gallons per day", which according to the European Communities converts to $3.127 per 100 cubic feet. The Panel has before it evidence regarding Boeing's consumption and payments made for sanitary sewer and process wastewater services in the period 2000-2006.[1871] Based on this evidence, it is possible to calculate a per unit rate paid by Boeing for the services by dividing the total amount of payments made by the amount of Boeing's consumption. This calculation shows that the rates paid by Boeing per 100 cubic feet for sewer services in the post-2003 period were clearly higher than the rate mentioned in the MSA.

7.542 The European Communities acknowledges that "{a}ccording to the City of Everett, Boeing made payments for sewer services in 2004 and 2005 at the higher 2004 and 2005 rates". However, "since the project Olympus Master Site Agreement imposes a legal obligation on the City to fix Boeing's sewer rates at the 2003 level, the European Communities assumes that Boeing will (or already may have) received refunds for 2004 and 2005 equal to the difference between what it paid and what it would have paid at 2003 rates."[1872] The Panel considers that a more logical interpretation of the fact that Boeing actually paid amounts for sewer services at rates that were higher than the rate in force in 2003 is that the MSA simply did not obligate the City of Everett to freeze that rate at its 2003 level. The Panel notes, in this respect, that there is no evidence before the Panel to support the assertion that Boeing received refunds of amounts paid in 2004-2005 in excess of the rate in force in 2003.

7.543 Fourth, the Panel considers that other evidence before it regarding the various incentives provided by the State of Washington to Boeing lends further support to the view that the MSA did not obligate the City of Everett and Snohomish County to freeze indefinitely the rates of certain utility services used by Boeing. For example, a document submitted by the European Communities, which contains answers of the Governor of Washington State to commonly asked questions regarding the contents of the MSA, states that the City of Everett and Snohomish County made commitments regarding "{i}nfrastructure improvements and service such as water, sewer or solid waste treatment as deemed necessary by Boeing (Exhibits C of the Agreement). Costs will be recovered through rate revenues or relevant tariffs".[1873] Nothing in this document indicates that the City of Everett and Snohomish County had agreed to fix certain rates at the levels applicable at the time of the conclusion of the MSA.

7.544 The Panel notes that the European Communities also alleges that Snohomish County has made a commitment in the MSA to freeze indefinitely the rate charged to Boeing for solid waste disposal services. However, since Snohomish County was unable to provide data on Boeing's annual consumption of solid waste disposal services and on the amounts of the annual payments made by Boeing for such services[1874], the European Communities does not include this alleged freeze of the rate charged for waste disposal services in its estimate of the amount of the subsidy.[1875] As in the case of the alleged freeze of utility rates charged by the City of Everett, the Panel is not convinced that there is sufficient support in the text of the MSA for the European Communities' contention that

[1871] See above, footnote 1870.
[1872] Estimates of City of Everett Water/Sewer Subsidies to Boeing, p.4, footnote 4, Exhibit EC-22. See also, City of Everett Utility Rate FOIA Response, Exhibit EC-154; Everett Utilities Rate Tables for 2004, 2006 and 2007, Exhibit US-230.
[1873] Action Washington, The Master Site Agreement, Commonly Asked Questions, Exhibit EC-63, p.5.
[1874] Snohomish County Solid Waste FIOIA Response, Exhibit EC-155.
[1875] European Communities' first written submission, para. 276.

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Snohomish has made a commitment not to raise the rate charged to Boeing for waste disposal services above the level applicable at the time of the conclusion of the MSA.

7.545 In sum, the Panel finds that the European Communities has not demonstrated that the MSA obligates the City of Everett and Snohomish County not to increase the rates charged to Boeing for the use of certain utility services above the levels applicable at the time of the conclusion of the MSA. Thus, the European Communities has not demonstrated that the measure which the European Communities alleges to constitute a financial contribution actually exists.

Conclusion

7.546 **For these reasons, the Panel finds that the European Communities has not demonstrated that a subsidy exists within the meaning of Article 1 of the SCM Agreement by virtue of a commitment undertaken by the City of Everett and Snohomish County in the MSA not to increase the rates charged to Boeing for the use of certain utility services above the levels applicable at the time of the conclusion of the MSA.**

(v) Provision of coordinators

Introduction

7.547 The European Communities argues that the MSA requires the State of Washington to provide Boeing with a number of dedicated coordinators to facilitate Project Olympus and that this provision of coordinators is a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement. The European Communities estimates that the amount of the subsidy to Boeing's LCA division is at least $0.9 million over the period 2004-2006.

7.548 The United States argues that the amount of the financial contribution resulting from the provision of these coordinators is *de minimis*, that the provision of these coordinators does not confer a benefit within the meaning of Article 1.1(b) and that any benefit is not specific within the meaning of Article 2 of the SCM Agreement.

The measure at issue

7.549 Article III of the MSA ("Facilitation of Project Olympus") states "that it is in the parties' best interests for the design, development, construction, equipping and operational start up of the Facilities to proceed on an expedited timetable" and provides for the designation of seven coordinators[1876], each of whom is required to "devote such time as may be required to carry out his or her duties prior to and during Facilities Construction and thereafter as needed by Boeing".[1877]

Arguments of the European Communities

7.550 The primary argument of the European Communities regarding the existence of a financial contribution is that by providing Boeing with the services of its employees to help facilitate Boeing's production of the 787 the State of Washington provides goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1878] Alternatively, the European Communities submits that given that the State of Washington must provide Boeing with

[1876] Article 3.1.1 of the MSA, as amended, provides for a Project Coordinator, an Environmental Permit Coordinator, a Permit Coordinator, a Tax, Commitment and Incentive Coordinator, a Workforce Development Coordinator, a Transportation Infrastructure Coordinator and an Everett Coordinator.

[1877] MSA, Art. 3.1.1 The State of Washington established the 787 Project Coordination Office and appointed the coordinators in Spring 2004.

[1878] European Communities' first written submission, para. 167.

a remedy of equivalent economic effect if it cannot provide the coordinators themselves, a potential direct transfer of funds exists within the meaning of Article 1.1(a)(1)(i).[1879]

7.551 The European Communities argues that the provision of coordinators by the State of Washington confers "benefits" on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because the coordinators "relate explicitly to the production of the 787 and are provided to Boeing's LCA division on non-market terms". Specifically, the European Communities argues that: (i) "Boeing is not required to pay anything in return for these Project Olympus coordinators, who all help facilitate Boeing's 787 programme" and (ii) the "advantages conferred on Boeing's LCA division are provided on non-market terms" in that the State of Washington is paying the salaries of the coordinators which Boeing would have to pay if it were to seek these coordination services on the market.[1880]

7.552 The European Communities alleges that the provision of special coordination services to Boeing by the State of Washington is specific within the meaning of Article 2.1(a) of the SCM Agreement because the provision of these coordinators is part of an agreement specifically between Boeing and the State of Washington and the MSA explicitly states that the State shall designate the coordinators for Boeing and make their services available "as needed by Boeing". Thus, under the terms of the MSA the State has explicitly limited access to the coordinators to Boeing.[1881]

7.553 In the alternative, the European Communities argues that the provision of coordinators under the MSA is specific within the meaning of Article 2.1(c) of the SCM Agreement because the MSA makes it clear that the coordinators will be at the disposal of Boeing to use "as needed" and the history of "The Boeing Incentive Package" shows that the coordinators were intended to directly benefit Boeing's production.[1882] The European Communities contends that by stating that the State provides coordination services to many other businesses in Washington State, the United States fails to rebut the European Communities' prima facie case under Article 2.1(c). The fact that Washington State may also provide coordination services for other projects based on what appear to be arbitrary and discretionary criteria does not demonstrate that the provision of coordinators under the MSA is not specific. Rather, it means that the provision of coordinators for other projects may also be specific.[1883]

7.554 The European Communities argues that, should the Panel consider that the Washington State law on "Projects of State-wide Significance" is relevant to the specificity analysis, *quod non*, the Panel need not review that law, or its criteria for determination of "Projects of State-wide Significance," in detail. This is because Article 3.1 of the MSA provides clear evidence that Boeing's Project Olympus would be designated as a "Project of State-wide Significance" without any consideration of the broader Washington State law. Thus, Article 3.1 demonstrates that the

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[1879] European Communities' first written submission, para. 167.

[1880] European Communities' first written submission, paras. 169-172; European Communities' second written submission, paras. 101-103. The European Communities posits that, for purposes of determining whether a benefit exists, the critical question is whether Boeing receives something that is not available on the market. The fact that, as argued by the United States, the State of Washington has in place a broader programme of providing coordination services is not relevant in this regard. European Communities' response to question 242.

[1881] European Communities' first written submission, para. 173. The European Communities argues that at issue in this case is the provision of coordinators to Boeing pursuant to the MSA, not the provision of coordinators with respect to other projects in the State of Washington. These coordinators are guaranteed to Boeing by the terms of Article 3.1 of the MSA, especially when read in conjunction with the "Make Whole" provision of Article 10.4.1. Furthermore, the MSA is an agreement that the State entered into with Boeing, and only Boeing. European Communities' second written submission, para. 105.

[1882] European Communities' first written submission, para. 174.

[1883] European Communities' second written submission, para. 106.

designation of a project as a "Project of State-wide Significance" is indeed arbitrary and discretionary, or at least has been so in the present case.[1884]

Arguments of the United States

7.555 The United States argues that other than two project coordinators, Washington did not hire new coordinators specifically to serve Boeing and that the coordinators were existing State employees. The financial contribution of the project coordinators for Boeing is *de minimis* at most as the payment of total salaries expended for the Project Coordinator's office during 2004-2005 was only $213,600. Moreover, the project coordinator function was terminated on 30 June 2005 and there are no plans to provide any further funding for it.[1885] The United States argues that Boeing receives no benefit under the SCM Agreement from the project coordinators because the State employees who serve as project coordinators are simply doing their jobs. Even absent the existence of Article 3.1 of the MSA, State employees would still have been available to assist Boeing in meeting regulatory and other requirements. Boeing is also not receiving a benefit from the project coordinators because this office has been closed since June 2005.

7.556 The United States argues that the provision of the project coordinators is not specific within the meaning of Article 2 of the SCM Agreement. By law, all projects of state-wide significance are eligible to receive similar coordination assistance from the State. In order to qualify as a project of state-wide significance, a project must have high capital investment, full-time employment of over 100 people after completion of the project, and significant regional impact. To qualify, a project must also be located in a county that meets the rural threshold or otherwise requires economic assistance, or have a large regional impact. In addition, Washington's Office of Regulatory Assistance frequently provides assistance to businesses of all sizes regarding the State's complex permitting process.[1886] The United States argues that the provision of project coordinators is not *de jure* specific under Article 2.1(a). The provision of project coordinators is contingent on the designation of a project as a "Project of State-wide Significance" and it is Washington State law, not the MSA, that sets forth the criteria for designation as a Project of State-wide Significance. Thus, the MSA, on its own, does not provide for project coordinators. Rather, the coordinators are provided pursuant to the provision of Washington State law for projects of state-wide significance. The criteria taken into account to determine whether a project is of state-wide significance apply regardless of the enterprises or industries involved in the project.[1887]

7.557 The United States notes the statement of the European Communities that its *de jure* specificity argument with respect to the provision of project coordinators is that "the granting authority explicitly limits access" to the alleged subsidies, not that "the legislation pursuant to which the granting authority operates explicitly limits access" to the alleged subsidies. However, in providing the project coordinators Washington State was acting pursuant to legislation, which is also reflected in Article 3.1 of the MSA, according to which the provision of project coordinators is contingent on the designation of a project as a "Project of State-wide Significance".[1888]

7.558 The United States rejects the assertion of the European Communities that the fact that the State may also provide coordination services for other projects selected according to what appear to be arbitrary and discretionary criteria does not demonstrate that the provision of coordinators is not

[1884] European Communities' comments on United States' response to question 233, para. 323.
[1885] United States' first written submission, para. 570; United States' response to question 240, para. 401 ("...the provision of the two dedicated project coordinators to facilitate the establishment of Boeing's 787 facility does constitute a financial contribution").
[1886] United States' first written submission, para. 571.
[1887] United States' response to question 233, paras. 388-389.
[1888] United States' comments on European Communities' response to question 144, paras. 136-137.

specific. The United States submits that what the European Communities describes as "arbitrary and discretionary" criteria, are in fact non-specific criteria under which a broad range of industries and enterprises have been provided project coordinators by the State. This is both directly relevant to the de facto specificity inquiry and also demonstrates that the provision of project coordinators by the State of Washington is not specific to the aerospace industry or to Boeing. In the light of this, the project coordinators are also not de facto specific under Article 2.1(c) of the SCM Agreement.[1889]

Evaluation by the Panel

7.559 Assuming *arguendo* that the provision of coordinators by the State of Washington is a subsidy in that it constitutes a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement, which confers a benefit within the meaning of Article 1.1(b), the Panel considers that the European Communities has not demonstrated that this subsidy is specific within the meaning of Article 2 of the SCM Agreement.

7.560 Under Article 2.1(a) of the SCM Agreement, a subsidy is specific if the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy to certain enterprises. As noted above, in support of its argument that the provision of coordinators is specific within the meaning of Article 2.1(a) the European Communities argues that the provision of these coordinators is part of an agreement specifically between Boeing and the State of Washington and that the MSA explicitly states that the State shall designate the coordinators for Boeing and make their services available "as needed by Boeing". The European Communities considers that it is irrelevant that Washington State may also provide coordinators for other projects. It emphasizes that its argument under Article 2.1(a) is that the granting authority, rather than "the legislation pursuant to which the granting authority operates", explicitly limits access to the subsidy to certain enterprises.

7.561 It is clear from the text of the MSA that the provision of coordinators to Boeing took place within the framework of existing legal provisions of the Washington Code relating to the provision of coordination services in respect of projects of state-wide significance.

7.562 Article 3.1 of the MSA states:

> "...in order for the development of Project Olympus to commence as soon as possible, to proceed in an efficient manner and to be completed on schedule, the State, through the applicable SLG, shall do all things and take all actions, in cooperation with Boeing, including, without limitation, the designation by CTED of Project Olympus as a project of state-wide significance upon application by Boeing pursuant to Section 43.157.005 of the Code, commencing upon the Effective Date, to cause the following to occur: 3.1.1 ...".

7.563 Section 43.157.005 of the Washington Code in the version in force at the time of the conclusion of the MSA, states:

> "The legislature declares that certain industrial investments merit special designation and treatment by governmental bodies when they are proposed. Such investments bolster the economies of their locale and impact the economy of the state as a whole. It is the intention of the legislature to recognize industrial projects of state-wide significance and to encourage local governments and state agencies to expedite their completion."

[1889] United States' response to question 233, para. 390.

BCI deleted, as indicated **[***]**

7.564 Section 43.157.030 of the Washington Code in the version in force at the time of the conclusion of the MSA, specifically provides for the provision of coordinators to projects of state-wide significance.

7.565 It is thus clear that Washington State had in place a programme for the provision of coordination services in respect of projects of state-wide significance and that the provision of coordinators under the MSA was a specific instance of application of this programme rather than an isolated, *ad hoc* action.[1890] Consistent with the approach adopted elsewhere in this Report, the Panel considers that where a subsidy forms part of a broader programme, the question of whether the subsidy is specific must in principle be answered at the level of the broader programme. Thus, in this case, to answer the question of whether the provision of coordinators to Boeing is specific it is necessary to conduct an analysis of whether the legislation pursuant to which Washington State provides these coordination services to projects of state-wide significance explicitly limits access to these services to certain enterprises. The European Communities has not advanced any arguments to demonstrate that access to the broader programme pursuant to which Washington State offers coordination services with respect to projects of state-wide significance is subject to an explicit limitation to certain enterprises. Therefore, assuming that the measure is a subsidy, there is no basis for the Panel to find that the European Communities has demonstrated that this subsidy is specific within the meaning of Article 2.1(a) of the SCM Agreement.

7.566 Similarly, the Panel considers that the European Communities has failed to advance convincing arguments to support a finding that the provision of coordinators under the Washington State measure relating to projects of state-wide significance is specific within the meaning of Article 2.1(c) of the SCM Agreement. While it has asserted that the criteria for designating projects as being of state-wide significance are arbitrary, it has provided very little support for this assertion. The European Communities has also not provided an analysis of how the factors enumerated in the second sentence of Article 2.1(c) support a finding of de facto specificity.

Conclusion

7.567 **For these reasons, the Panel finds, assuming *arguendo* that the provision of coordinators by the State of Washington in connection with Project Olympus is a subsidy within the meaning of Article 1 of the SCM Agreement, that the European Communities has not demonstrated that this subsidy is specific within the meaning of Article 2 of the SCM Agreement.**

(vi) Job training incentives

Introduction

7.568 The European Communities argues that a workforce development programme and an Employment Resource Center provided for in the MSA constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. The European Communities estimates that the amount of the subsidies to Boeing's LCA division resulting from these "job training incentives" is $14 million over the period 2004-2007 in the case of the workforce development programme and $4.78 million over the period 2007-2011 in the case of the ERC.

7.569 The United States argues that: (i) the amount of the subsidy from these measures is much smaller than alleged by the European Communities; (ii) the workforce development programme is not specific; and (iii) the ERC is specific only in the first five years of its existence.

[1890] The Panel considers that the European Communities fails to substantiate its assertion that Project Olympus was designated as a project of state-wide significance without any consideration of the criteria identified in the Washington State Code.

BCI deleted, as indicated **[***]**

The measures at issue

7.570 First, the State of Washington agreed in the MSA to establish a workforce development programme. The MSA provides in this regard:

> "Consistent with the funding Commitments and program description set forth in Exhibits D-1, D-2 and D-3, the State agrees to fund an end-to-end recruitment, screening, assessment and training program to meet the initial staffing and workforce development needs of Boeing and its Suppliers and other parties designated by Boeing for Project Olympus."[1891]

To this end, the State entered into a contract with Accenture, LLP, in May 2005 and provided it with a budget of $4.4 million to develop the workforce development programme that would operate out of the Employment Resource Center by 30 June 2006.

7.571 Second, the State of Washington agreed to build an Employment Resource Center ("ERC"). The MSA provides in this regard:

> "In order to provide a facility for the necessary workforce development activities dedicated to the 7E7 Aircraft production and assembly, including recruitment, screening, assessment, pre-employment training and employment life cycle services, the State hereby agrees to either acquire an existing facility or construct a new facility, and in either case, design engineer, modify and equip such facility to serve as the ERC.
>
> {...}
>
> The Parties agree that the State, through the AFB, shall pay all costs, fees and expenses in connection with or arising out of all obligations and Commitments set forth in this Section 7.5.1".[1892]

The State paid $950,000 per year to lease the ERC from Sierra Construction, the company which built it.[1893] The ERC became operational on 1 August 2006. Boeing has exclusive use of the ERC for a period of five years.[1894]

7.572 These job training incentives are overseen by the Workforce Development Coordinator, provided for in Article 7.3 of the MSA, and by an Aerospace Futures Board ("AFB"), which was established pursuant to Article 7.4 of the MSA.[1895]

Arguments of the European Communities

7.573 The primary argument of the European Communities with respect to why the job training incentives are financial contributions within the meaning of Article 1.1(a)(1) of the SCM Agreement is that they constitute provisions of goods or services other than general infrastructure within the meaning of Article 1.1(a)(1)(iii). First, the State of Washington provides services to Boeing by helping Boeing recruit and train the workers who will manufacture the 787. Second, the State

[1891] MSA, Art. 7.2.1, Exhibit EC-58.
[1892] MSA, Art. 7.5.1, Exhibit EC-58.
[1893] Bryan Corliss, Builders break ground on 787 training center, Exhibit EC-111.
[1894] MSA, Art. 7.5.2, Exhibit EC- 58.
[1895] As explained in Article 7.4 of the MSA, the AFB is "a private not-for-profit panel or other mutually agreeable structure of aerospace industry employers (including Boeing and any Suppliers or other entities designated by Boeing) along with such of the Public Parties as may be designated by Boeing".

provides goods and services to Boeing by building the ERC to Boeing's specification and then giving Boeing the exclusive use of the ERC.[1896] Alternatively, the European Communities submits that the job training incentives constitute potential direct transfers of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement because under Article 10.4.1 of the MSA the State of Washington must provide Boeing with a remedy of equivalent economic effect if it cannot provide the job training incentives.

7.574 The European Communities argues that the job training incentives confer "benefits" on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because they relate explicitly to the production of the 787 and are provided to Boeing's LCA division on non-market terms. Boeing is not required to pay rent, user fees, or any other consideration for construction or use of the ERC, while on the market it would be required to pay something for these goods and services. In particular, on the market Boeing would be responsible for paying the full salaries of the persons involved in the aforementioned activities, as well as costs for construction and use of the ERC.[1897]

7.575 The European Communities argues that Washington State's provision of these job training incentives to Boeing is specific within the meaning of Article 2.1(a) of the SCM Agreement. First, the provision of these incentives is part of an agreement specifically between Boeing and the State of Washington. Second, the MSA explicitly states that the workforce development programme is designed to "meet the initial staffing and workforce development needs of Boeing" and parties designated by Boeing. Further, Boeing has five-year exclusive use of the ERC, which is a stand-alone facility built to Boeing's specifications in close proximity to the 787 manufacturing site. Thus, the provision of these incentives is specific because the State of Washington has tailored these incentives for Boeing's benefit under the terms of the MSA.[1898] The European Communities argues in the alternative that, should the Panel consider the job training incentives not to be specific under Article 2.1(a) of the SCM Agreement, they are specific within the meaning of Article 2.1(c) of the SCM Agreement because Boeing will be the predominant beneficiary thereof.[1899]

7.576 The European Communities notes that the United States has acknowledged in its first written submission that the ERC is specific during the five years that Boeing has exclusive use of the facility.[1900] The European Communities rejects the argument of the United States that the workforce development programme is not specific. While it may be true that the workforce development programme is also open to Boeing suppliers, this does not demonstrate that the workforce development programme is not specific. An explicit limitation contained in the MSA to Boeing and its suppliers is still an explicit limitation to "certain enterprises" within the meaning of Article 2.1(a) of the SCM Agreement because a subsidy is specific pursuant to Article 2.1(a) or 2.1(c) if it is limited to "certain enterprises," which means "an enterprise or industry or group of enterprises or industries."[1901] With respect to the United States' argument that the skills emphasized in the programme are transferable to other industries, the European Communities observes that this argument is unsubstantiated and irrelevant to the specificity analysis in the circumstances of the present case.[1902]

7.577 In its first written submission, the European Communities asserts that the amount of the financial contribution to Boeing from job training incentives is at least $24 million from 2004 through

[1896] European Communities' first written submission, para. 180.
[1897] European Communities' first written submission, paras. 183-186.
[1898] European Communities' first written submission, para. 187.
[1899] European Communities' first written submission, para. 188.
[1900] European Communities' second written submission, para. 112.
[1901] European Communities' second written submission, para. 113.
[1902] European Communities' second written submission, paras. 112-113.

2007.[1903] In support of this assertion, the European Communities relies on the text of the MSA, according to which the State allocated approximately $14 million for the workforce development programme from 1 July 2003 through 30 June 2007[1904] and a minimum of $10 million for the ERC, which opened on 1 August 2006 – i.e. one month into FY 2007. Thus, these job training incentives cost the State at least $24 million, which the European Communities assumes is spread evenly from FY 2004 through FY 2007.[1905]

7.578 In its second written submission, the European Communities submits a revised estimate of the amount of the financial contribution in relation to the ERC. This revised estimate takes into account the fact that, as argued by the United States in its first written submission, the State of Washington has not actually built an employment resource centre but has leased a facility. The European Communities asserts that the financial contribution arising from the lease of the ERC is $4.78 million over the five years from FY 2007 through FY 2011, not just $478,200 for the first half of FY 2007, as argued by the United States. The European Communities accepts that the State of Washington is leasing a facility for use as the ERC at an annual cost of $956,400 for the first five years, based on the lease actually provided by the United States.[1906] However, the European Communities argues that the State made a commitment to provide Boeing with exclusive use of the ERC for the first five years through the MSA and that this commitment is further guaranteed to Boeing through the "Make Whole" provision of the MSA. As such, the financial contribution to Boeing is the cost to the State of leasing the ERC for Boeing's use over that time period – i.e. $4.78 million.[1907]

7.579 The European Communities rejects the argument of the United States that since funding for the workforce development programme is a combination of State and federal funds, only the $1 million provided by the State should count as a financial contribution.[1908] The critical point is that in the MSA, it was the State of Washington that committed to providing $14 million for the workforce development programme. The origin of the funding sources, whether State or federal, is irrelevant.

Arguments of the United States

7.580 The United States does not contest the existence of a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement in relation to the ERC but it disputes the assertion of the European Communities that the amount of this financial contribution is $10 million during 2004-2007. The United States argues, in this regard, that the State of Washington agreed in the MSA to pay a minimum of $10 million for the creation and establishment of an employment resource centre, but that, rather than building a new employment resource centre, the State actually chose to lease a facility. This lease will cost $956,400 per year or $4.78 million over 5 years during which Boeing has exclusive use of the ERC. Since the ERC was not in force prior to August 2006, the amount of the financial contribution through December 2006 in relation to the ERC has been only $478,200 rather than the $10 million that the European Communities claims.[1909]

7.581 The United States argues that the benefit to Boeing of the ERC is only $478,200 through December 2006. Moreover, because Boeing is only entitled to exclusive use of the facility for the first five years, the entire amount of the facility cannot be attributed to Boeing. After 2011, the ERC will revert to general public use, and even if Boeing chooses to lease the facility from Washington, it must be open to the aerospace industry generally, including suppliers of Airbus. The United States

[1903] State and Local Subsidies to Boeing LCA Division, 1-2, Exhibit EC-27.
[1904] MSA Exhibit D-2, Exhibits to the MSA, Exhibit EC-59.
[1905] European Communities' first written submission, paras. 181-182.
[1906] Employment Resource Center Lease, August 2005, p. 3, Exhibit US-239.
[1907] European Communities' second written submission, para. 108.
[1908] European Communities' second written submission, para. 109.
[1909] United States' first written submission, para. 583.

submits that this fact further reduces the benefit to Boeing.[1910] Finally, the United States argues that the ERC is specific to Boeing only for its first five years of operating and that if it continues, it will be available to the general public.[1911]

7.582 Regarding the workforce development programme, the United States argues that funding for this programme is a combination of State and federal funds. The State of Washington provided $1 million pursuant to a job skill programme.[1912] The United States argues that the workforce development programme is not limited to Boeing because Article 7.2.1 of the MSA states that the workforce development programme is also open to Boeing suppliers. Because the skills that are emphasized in the programme are transferable to other industries, the programme is not specific.[1913]

Evaluation by the Panel

7.583 The Panel considers that both the ERC and the workforce development programme are financial contributions within the meaning of Article 1.1(a)(1) of the SCM Agreement and that each of these financial contributions confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

7.584 First, regarding the workforce development programme, the Panel notes that the State of Washington made a commitment in the MSA "to fund an end-to-end recruitment, screening, assessment and training program to meet the initial staffing and workforce development needs of Boeing and its Suppliers and other parties designated by Boeing for Project Olympus".[1914] The State appropriated approximately $14 million for this workforce development programme in the period 1 July 2003-30 June 2007.[1915]

7.585 The European Communities argues that the workforce development programme is a financial contribution within the meaning of Article 1.1(a)(1)(iii) in the form of a provision of services to Boeing other than general infrastructure.[1916] The Panel finds that the above-mentioned facts support this argument. The Panel notes, in this regard, that the United States does not contest the existence of a financial contribution within the meaning of Article 1.1(a)(1)(iii).

7.586 The Panel notes that the United States argues in its first written submission, in relation to the workforce development programme, that "the funding for this program is a combination of State and federal funds. The State of Washington provided $1 million pursuant to a job skills program".[1917] The United States has not elaborated on this argument in the course of this proceeding. If this statement is to be interpreted as an argument that only the $1 million provided by the State of Washington should be treated as relevant for purposes of determining the existence and amount of the financial contribution, the Panel finds such an argument unconvincing. Apart from the fact that the United States has not explained what the factual basis is for the assertion that "the funding for this program is a combination of State and federal funds"[1918], the United States has not articulated a legal rationale for limiting the financial contribution at issue to the portion of the funding provided by the State of Washington. The Panel sees nothing in Article 1 of the SCM Agreement to suggest that

[1910] United States' first written submission, para. 583.
[1911] United States' first written submission, para. 585; United States' response to question 13, para. 28.
[1912] United States' first written submission.
[1913] United States' first written submission, para. 585.
[1914] MSA, Art. 7.2.1, Exhibit EC-58.
[1915] MSA Exhibit D-2, Exhibits to the MSA, Exhibit EC-59.
[1916] European Communities' first written submission, para. 180.
[1917] United States' first written submission, para. 583.
[1918] The Panel can see no reference in Article 7.2 of the MSA or in Exhibit D-2 to the MSA to the use of federal funds. By contrast, with regard to the ERC, Exhibit D-3 to the MSA states that "the ERC will be constructed and equipped through a combination of State and federal funds".

where a public authority at a given level of government makes a financial contribution which is funded in part by authorities at another level of government, the funding provided by the authorities at that other level of government should not be taken into account in determining the existence and amount of a financial contribution.

7.587 Second, regarding the ERC, the Panel notes that the State of Washington made a commitment in the MSA to take certain steps "to provide a facility for the necessary workforce development activities dedicated to the 7E7 Aircraft production and assembly".[1919] The MSA also provides that "Boeing shall have the exclusive use of the ERC for a minimum of five years for the benefit of Boeing and its Suppliers".[1920] The State of Washington agreed that it would appropriate, at a minimum, $10,000,000 for the design and construction of the ERC.[1921] However, instead of constructing a new facility, the State decided to lease an existing facility, at a cost of $956,400 per year.[1922] In the light of these facts, the Panel finds that by providing the ERC to Boeing for its exclusive use during a period of five years the State of Washington provides a financial contribution within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[1923] The Panel notes that the United States contests neither the existence of the financial contribution nor the fact that the financial contribution is covered by Article 1.1(a)(1)(iii).

7.588 With regard to whether each of the financial contributions at issue confers a benefit within the meaning of Article 1.1(b), the Panel considers that the financial contributions made by the State of Washington through the workforce development programme and the ERC are provided on terms that are more favourable than the terms available to the recipient in the market. There is nothing in the evidence before the Panel to suggest that Boeing has provided any form of remuneration, let alone adequate remuneration in the sense of Article 14(d) of the SCM Agreement, for the goods and services provided by the State of Washington in the form of the workforce development programme and the ERC. The Panel also notes, in this regard, that the United States does not dispute that the financial contributions related to the ERC and workforce development programme confer benefits within the meaning of Article 1.1(b) of the SCM Agreement.

7.589 For these reasons, the Panel finds that the workforce development programme and the ERC are subsidies within the meaning of Article 1 of the SCM Agreement.

7.590 The Panel considers that the subsidies provided by the State of Washington through the workforce development programme and the ERC are specific within the meaning of Article 2.1(a) of the SCM Agreement.

7.591 First, the workforce development programme concerns "the initial staffing and workforce development needs of Boeing and its Suppliers and other parties designated by Boeing for project Olympus".[1924] A finding of specificity under Article 2.1(a) requires a limitation that expressly and unambiguously restricts the availability of a subsidy to "certain enterprises", such that the subsidy is not "sufficiently broadly available throughout an economy". A subsidy that specifically addresses the needs of "Boeing and its Suppliers and other parties designated by Boeing" clearly is not "sufficiently broadly available throughout an economy". In this regard, the Panel finds unconvincing the argument of the United States that the workforce development programme is also open to Boeing suppliers. The question under Article 2.1(a) is not whether the subsidy is "limited to Boeing" but whether it is specific to "certain enterprises" as that concept is used in the chapeau of Article 2.1. While the

[1919] MSA, Art.7.5.1, Exhibit EC-58.
[1920] MSA, Art.7.5.2, Exhibit EC-58.
[1921] MSA Exhibit D-3, Exhbits to the MSA, Exhibit EC-59.
[1922] Employment Resource Center Lease, Exhibit US-239, p.3.
[1923] In the Panel's view, the measure involves a provision of both goods and services.
[1924] MSA, Art. 7.2.1, Exhibit EC-58.

workforce development programme may be open to Boeing suppliers, that does not alter the fact that the programme is limited to "an enterprise or industry or group of enterprises or industries".[1925] The Panel is also not convinced by the argument made by the United States that the skills that are emphasized in the workforce development programme may be transferable to other industries. The United States has not explained, and the Panel fails to see, how this has any bearing on the specificity analysis. The subsidy that is specific consists of the financial contribution through the funding of the workforce development programme by Washington State for the needs of Boeing and its suppliers. The fact that the Boeing staff (or its suppliers' staff) who benefited from the programme can later use or transfer knowledge to other industries, is not relevant in this respect.

7.592 Second, regarding the ERC, the Panel recalls that the MSA provides that Boeing will enjoy exclusive use of the facility for a period of five years. The Panel considers that such exclusive use is a clear instance of an "express limitation" of access to a subsidy within the meaning of Article 2.1(a) of the SCM Agreement. The United States has not contested that this subsidy is specific by virtue of this right of exclusive use granted to Boeing.

7.593 Having found that the subsidies provided through the workforce development programme and the ERC are specific within the meaning of Article 2.1(a) of the SCM Agreement, it is not necessary for the Panel to analyze the argument made by the European Communities in the alternative that these subsidies are specific within the meaning of Article 2.1(c) of the SCM Agreement.

7.594 For these reasons, the Panel finds that the workforce development programme and the ERC are specific subsidies to Boeing within the meaning of Articles 1 and 2 of the SCM Agreement.

7.595 The Panel notes that the estimates provided by the European Communities of the amounts of the subsidies resulting from the workforce development programme and the ERC pertain in part to the post-2006 period. With regard to the workforce development programme, the European Communities estimates that the amount of the subsidy is $10.5 million over the period 1989-2006 and $3.5 million over the period 2007-2024. With regard to the ERC, the European Communities estimates that the amount of the subsidy is $4.78 million over the period FY2007-2011. Of this amount $478,200 reflects the amount of the subsidy in the second half of calendar year 2006 (the first half of FY 2007). The rest of this amount relates to the period post-2006.

7.596 The Panel considers, based on the evidence before it, that $10.5 million is a reasonable estimate of the amount of the subsidy resulting from the workforce development programme in the period 1989-2006. The Panel recalls, in this regard, that it has rejected the argument of the United States that the amount of the financial contribution and benefit from this measure is limited to the $1 million contributed by the State of Washington. The Panel also considers, based on the evidence before it, that $478,200 is a reasonable estimate of the amount of the subsidy resulting from the ERC in 2006. The Panel considers that it is not necessary to estimate the amounts of the subsidies resulting from the workforce development programme and the ERC at issue in the post-2006 period. As indicated in the serious prejudice section of this Report, the Panel considers it appropriate to assess the European Communities' present serious prejudice claim by examining the effects of the subsidies over the period 2004-2006.[1926] As discussed elsewhere in this Report[1927], the European Communities has confirmed that it relies upon post-2006 subsidy amounts only for those subsidies that it classifies as recurring subsidies that reduce Boeing's marginal unit costs. Given that the European

[1925] Panels that have considered the meaning of "certain enterprises" in the chapeau to Article 2 have agreed that an "industry" may generally be referred to by the type of products it produces, which may include a broad range of end-products, rather than a specific type of product. Panel Report, *US –Softwood Lumber IV*, paras. 7.120 – 7.121, Panel Report, *US – Upland Cotton*, para. 7.1142.

[1926] See below, paras. 7.1676-7.1679.

[1927] See above, para. 7.155.

Communities does not classify the workforce development programme or the ERC in this manner, but rather considers these measures to be subsidies that increase Boeing's non-operating cash flow[1928], it is clear that the post-2006 amounts for these subsidies play no part in the European Communities' present serious prejudice analysis. In its own analysis of present serious prejudice, the Panel also does not rely on any subsidy amounts relating to the post-2006 period. Moreover, the Panel exercises judicial economy in relation to threat of serious prejudice.[1929]

Conclusion

7.597 **For these reasons, the Panel finds that the workforce development programme and the ERC are specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. The Panel estimates that the amount of these subsidies to Boeing's LCA division in the period 1989-2006 is $11 million.**

(vii) Tax and other incentives related to the 747 LCF

Introduction

7.598 The European Communities argues that the MSA requires the State of Washington to provide Boeing with tax and other incentives related to the 747 LCF that are the same as those accorded in respect of the 787 and that this constitutes a specific subsidy wihtin the meaning of Articles 1 and 2 of the SCM Agreement.

7.599 The United States argues that no specific subsidy exists because the State of Washington is not providing any special tax incentives to the 747 LCF and there is nothing in the MSA stating that the State will provide the same goods and services with regard to the 747 as it provides in relation to the 787.

The measure at issue

7.600 The MSA provides:[1930]

> "The State and CTED {Department of Community, Trade and Economic Development} shall ensure 747-400 Large Cargo Freighter is eligible for all benefits afforded the 7E7 Program and shall facilitate a low cost operating environment for the aircraft through tax abatements and other avenues available through the appropriate state and local governments."

Arguments of the European Communities

7.601 The European Communities submits that the MSA requires the State of Washington to extend to the Boeing LCF programme "the same state and local tax breaks, and the same goods and services it provides to the 787".[1931]

7.602 In relation to the tax incentives associated with the 747 LCF, the European Communities argues that they constitute specific subsidies to Boeing within the meaning of the SCM Agreement. The tax benefits constitute a financial contribution under Article 1.1(a)(1)(ii) because the State of

[1928] European Communities' first written submission, para. 1230, figure 15.
[1929] See below, paras. 7.1851-7.1853.
[1930] First Amendment to Project Olympus Master Site Development and Location Agreement, 2 February 2004, Exhibit EC-60 (the amended Exhibit E to the MSA. See Article II(2.4) of Exhibit EC-60 explaining the insertion of an amended Exhibit E into the MSA.)
[1931] European Communities' first written submission, para. 190.

Washington is required to forego tax revenue that it would otherwise have collected.[1932] In the alternative, given that under the MSA the State of Washington must provide Boeing with a remedy of equivalent effect if it cannot provide the incentives, the tax benefits also constitute a potential direct transfer of funds under Article 1.1(a)(1)(ii) of the SCM Agreement.[1933]

7.603 In response to the United States' argument that the State of Washington is "not providing any special tax incentives to the 747 LCF", the European Communities argues that this is beside the point.[1934] The State's obligation is not to provide special tax incentives to the 747 LCF, but to ensure that it receives the *same* tax incentives as the 787, namely the HB 2294 tax breaks, which the United States concedes are extended in relation to the 747 LCF.[1935] The European Communities notes that it has already demonstrated that these are specific subsidies that benefit Boeing.[1936]

7.604 The European Communities argues that the requirement upon the State in the MSA to ensure that the 747 LCF receive *all benefits* afforded to the 787 means that the State must provide the 747 LCF programme with the same goods and services it provides to Boeing's 787 programme. This constitutes a provision of goods and services and therefore a financial contribution under Article 1.1(a)(1)(iii) of the SCM Agreement. Alternatively, there is a potential direct transfer of funds, for the same reason given in relation to the tax incentives.[1937]

7.605 The European Communities submits that the tax breaks and other incentives confer a benefit on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement. Boeing is not required to pay anything in return for the tax breaks and other incentives and therefore Boeing receives advantages on non-market terms.[1938]

7.606 In addition, the European Communities submits that the tax breaks and other incentives are *de jure* specific under Article 2.1(a) of the SCM Agreement. This is because they are part of an agreement specifically between Boeing and the State of Washington. Further, the MSA explicitly limits the extension of the tax breaks and incentives to the 747 LCF, an airplane that will be manufactured and used by Boeing for production of its 787 aircraft. Therefore, "the provision of these incentives is specific because the State of Washington has explicitly limited access to these incentives to Boeing under the terms of the {MSA}".[1939] In the alternative, the tax breaks and incentives are de facto specific under Article 2.1(c). This is because the MSA makes it clear that they will extend only to Boeing's 747 LCF, so Boeing will be the predominant beneficiary.[1940]

7.607 The European Communities argues that it is unable to estimate the value of the financial contributions resulting from the incentives, as the United States has not cooperated in providing the relevant information. The European Communities maintains that the value of the subsidies is "large".[1941] However, in response to Panel questioning, the European Communities concedes that the values it has calculated for the HB 2294 tax incentives include the tax incentives provided in relation

[1932] European Communities' first written submission, para. 191.
[1933] European Communities' first written submission, para. 193.
[1934] European Communities' second written submission, para. 115.
[1935] European Communities' second written submission, para. 115.
[1936] European Communities' second written submission, para. 115.
[1937] European Communities' first written submission, paras. 192-193.
[1938] European Communities' first written submission, paras. 195-197.
[1939] European Communities' first written submission, para. 199.
[1940] European Communities' first written submission, para. 200.
[1941] European Communities' first written submission, para. 194. See also, European Communities' response to question 41.

to the 747 LCF.[1942] Therefore, it is the other incentives to 747 LCF, apart from tax abatements (i.e. the provision of goods and services), which the European Communities is unable to calculate.

Arguments of the United States

7.608 In its first written submission, the United States argues that the "State of Washington is not providing any special tax incentives to the 747 LCF, and is therefore not foregoing any revenue otherwise due".[1943]

7.609 However, in its first written submission, the United States concedes that the 747 LCF is eligible for the tax measures that apply to Washington's aerospace sector more broadly, namely the measures enacted pursuant to HB 2294. However, according to the United States, these measures are not WTO-inconsistent subsidies to Boeing.[1944]

7.610 In response to Panel questioning, the United States confirms that its argument that there are no "special tax incentives" provided to the 747 LCF rests on the premise that the tax measures under HB 2294 are not subsidies.[1945]

7.611 The United States argues that the European Communities' contention that a financial contribution exists because Washington must provide the 747 LCF with the "same goods and services it provides to the 787", is baseless. There is nothing in the MSA stating that Washington will provide such goods and services to the 747 LCF.[1946]

7.612 In its first written submission, the United States argues that given the absence of any special tax incentives for the 747 LCF, "there is neither benefit nor specificity". However, in response to Panel questioning, the United States confirms that its argument rests upon the premise that the tax measures under HB 2294 are not subsidies.[1947]

7.613 The United States argues that the application of the tax treatment in HB 2294 to the 747 LCF is already included in the European Communities' calculation of the value of all the tax measures in HB 2294.[1948] The United States also submits that the argument that it has failed to cooperate in the information gathering process, in order to allow calculation of the value of the subsidies to the 747 LCF, lacks merit.[1949]

Evaluation by the Panel

7.614 The first issue before the Panel is whether Exhibit E of the MSA creates any new state or local taxation subsidies in Washington, or extends the reach of existing ones.

7.615 The taxation measures enacted under HB 2294 which we have found to constitute specific subsidies do not refer explicitly to the 787 or to "superefficient" airplanes. Therefore, these incentives apply to the 747 LCF irrespective of the clause in Exhibit E of the MSA challenged by the European Communities. For example, to the extent that the 747 LCF is manufactured in the State of Washington, which the evidence in fact indicates is not the case, the Washington B&O tax reduction

[1942] European Communities' response to question 250.
[1943] United States' first written submission, para. 578.
[1944] United States' first written submission, para. 578, footnote 766.
[1945] United States' response to question 42, para. 113.
[1946] United States' first written submission, para. 579.
[1947] United States' response to question 42, para. 113.
[1948] United States' response to question 250, para. 424.
[1949] United States' response to question 251, para. 447.

on manufacturing activities applies to it under the terms of HB 2294, regardless of Exhibit E of the MSA.[1950] Therefore, Exhibit E of the MSA does not create any new subsidies or extend existing ones.

7.616 The European Communities' submission that the MSA requires the State of Washington to extend to Boeing "the same state and *local* tax breaks … it provides to the 787"[1951] suggests that the European Communities is arguing that the MSA requires the City of Everett B&O tax reduction to be extended to the 747 LCF. However, to the extent that the 747 LCF is manufactured within the City of Everett, the tax reduction already applies to the 747 LCF, regardless of the MSA.

7.617 Therefore, the Panel finds that Exhibit E of the MSA does not create any additional taxation subsidies to Boeing. [1952] This conclusion is confirmed by the European Communities' concession that the values it has calculated for the HB 2294 tax incentives include the tax incentives provided in relation to the 747 LCF.[1953]

7.618 The second issue before the Panel is whether, as the European Communities asserts, the requirement in the MSA for the State to ensure that the 747 LCF "is eligible for all benefits afforded the 7E7 Program" constitutes a subsidy to Boeing in the form of the provision of goods and services to the 747 LCF programme.[1954]

7.619 The Panel has found that the only goods and services provided under the MSA that constitute specific subsidies to the Boeing 787 programme are the ERC and the services provided under the workforce development programme. Therefore, the question before the Panel is whether Exhibit E to the MSA, providing that the 747 LCF is "eligible for all benefits afforded to the 7E7 programme", has the effect that there is a further subsidy to Boeing in the form of an ERC and a workforce development programme in favour of the 747 LCF. The Panel does not need to decide whether this is the correct interpretation of Exhibit E. Even if it were, there is no evidence before the Panel to demonstrate that any workforce development activities relating to the 747 LCF have been conducted within the State of Washington. In fact, the evidence before the Panel reveals that the design work for the 747 LCF occurred in Moscow and the modifications to the 747-400s, to create the 747 LCFs, occurred in Chinese Taipei.[1955] Therefore, there is no evidence before the Panel to demonstrate that any workforce development activities of the type described in Exhibit D to the MSA occurred in the State of Washington in relation to the 747 LCF. Consequently, even if the correct interpretation of Exhibit E is that it provides for the possibility of workforce development support associated with the 747 LCF, there is no evidence that Boeing has ever taken advantage of this clause in Exhibit E.

7.620 As indicated at paras. 7.150-7.151 of this Report, in the Panel's view, the European Communities' serious prejudice claim is based upon use of the subsidies in issue by a particular entity,

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[1950] Boeing 787: Build globally, assemble locally, The Seattle Times, 11 September 2005, Exhibit EC-115, p. 4 indicates that the 747 LCF will be constructed from existing 747-400s in Chinese Taipei.

[1951] European Communities' first written submission, para. 190.

[1952] Although eligibility for three of the taxation measures under HB 2294 (i.e. the sales and use tax exemption on construction services and equipment, the leasehold excise tax exemption and the property tax exemption) is related to production of "superefficient planes", the definition of which is met by the 787, we have found that these three measures do not constitute subsidies to Boeing. The European Communities' case is that the MSA extends to the 747 LCF programme the taxation subsidies provided to the 787 programme. As these measures are not subsidies to the Boeing 787 programme, they do not fall within the European Communities' argument.

[1953] European Communities' response to question 250.

[1954] First Amendment to Project Olympus Master Site Development and Location Agreement, 2 February 2004, Exhibit EC-60 (the amended Exhibit E to the MSA. See Article II(2.4) of Exhibit EC-60 explaining the insertion of an amended Exhibit E into the MSA.)

[1955] Boeing 787: Build globally, assemble locally, The Seattle Times, 11 September 2005, Exhibit EC-115, p. 4.

namely Boeing. The European Communities does not argue that the provision of goods and services under Exhibit E is a financial contribution in the abstract. Rather, the European Communities' position is that the measure is a financial contribution *to Boeing*. Assuming that the effect of Exhibit E is to provide for the possibility of the provision of goods and services in relation to the 747 LCF programme, in circumstances where there is no evidence before the Panel that Boeing has ever claimed such goods and services, the Panel finds that there is no financial contribution to Boeing.

7.621 For the same reasons as expressed in relation to the Washington HB 2294 taxation measures and the MSA infrastructure-related measures, the Panel considers that the European Communities has not made out its argument in the alternative under Article 1.1(a)(1)(i) of the SCM Agreement.[1956]

Conclusion

7.622 **For these reasons, the Panel finds that the European Communities has not demonstrated that Exhibit E in the MSA gives rise to any additional subsidies to Boeing.**

(viii) Costs of legal proceedings

Introduction

7.623 The European Communities argues that the MSA requires the State of Washington to assume certain litigation costs incurred by Boeing and that this gives rise to a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement.

7.624 The United States argues that the MSA provision at issue does not constitute a subsidy because it does not entail a financial contribution.

The measure at issue

7.625 Article 11.3 of the MSA provides:

> "In the event that any third party or parties institute any legal proceedings against any of the Public Parties and/or Boeing relating in any manner to this Agreement, or any agreement, document or Permit, executed, issued or implemented pursuant to this Agreement, then the State (or such other SLG as the State may designate) shall assume the entire defense of such proceedings, including all fees, costs and expenses whatsoever relating thereto. The State's (or such other SLG) obligations pursuant to this Section 11.3 shall be subject to the terms and conditions set forth in Section 11.3.1 to Section 11.3.4."[1957]

Arguments of the European Communities

7.626 The European Communities submits that Article 11.3 of the MSA requires the State of Washington to pay all costs incurred by Boeing for any legal proceedings that may arise relating to the MSA and that Washington State's agreement to insure the costs of Boeing's legal proceedings related to the MSA constitutes a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. Should Boeing be involved in any litigation relating to the MSA, the State of Washington is required to transfer funds covering the fees, costs and expenses of such litigation to Boeing. The European Communities also argues that the fact that the State must provide Boeing with a remedy of equivalent economic effect if it cannot cover Boeing's litigation

[1956] See paras. 7.159-7.167 and paras. 7.173-7.178 of this Report.
[1957] MSA, Art. 11.3, Exhibit EC-58.

costs further demonstrates that a potential direct transfer of funds exists in connection with this "litigation risk insurance policy".[1958]

7.627 The European Communities submits that the arguments advanced by the United States in its first written submission reflect a fundamental misunderstanding of the European Communities' argument with regard to the State of Washington's commitment to pay Boeing's costs of legal proceedings. The European Communities submits, in this regard, that it has never made any arguments regarding litigation costs that Boeing may choose to independently incur or regarding the payment of potential damages or liability to Boeing. Rather, its argument is that should a third party or parties bring legal proceedings against Boeing, alone or together with the Public Parties, Washington State is required to pay all fees, costs and expenses relating to defending that litigation. The fact that the State of Washington has not yet engaged in any litigation relating to the MSA is entirely irrelevant. Moreover, the statement that the "State also does not expect such proceedings in the future" is inconsistent with the very existence of the provision at issue – a provision that the State and Boeing agreed was necessary because of the real possibility of such proceedings.[1959]

7.628 The European Communities argues that it is clear from the wording of Article 11.3 of the MSA that it mandates a potential direct transfer of funds to Boeing because the State or other SLG are required to pay for the fees, costs and expenses incurred by Boeing in defending against legal proceedings instituted by a third party. That this transfer is contingent on some other event taking place is what makes this provision a potential direct transfer of funds, as opposed to a direct transfer of funds. In this respect, Article 11.3 of the MSA is comparable to a loan guarantee.[1960]

7.629 The European Communities argues that Washington State's assumption of litigation costs confers "benefits" on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement because this litigation risk insurance policy relates explicitly to the production of the 787 and is provided to Boeing's LCA division on non-market terms. Boeing receives a guarantee from the State that it will assume Boeing's litigation risk related to the MSA that facilitates Boeing's development and production of the 787 in Washington State. This type of guarantee is an insurance policy for which Boeing pays nothing in return. On the market, Boeing would need to pay a premium for such an insurance policy. The benefits to Boeing from this assumption of litigation costs are the amounts of premium Boeing would be required to pay each year to insure against such litigation risk in the market. The European Communities submits that, as a result of lack of cooperation by the United States, it is unable to provide an estimate of the value of the these benefits.[1961] The European Communities argues that it is clear that absent Article 11.3 of the MSA, if a third party or parties instituted legal proceedings against Boeing relating to the MSA, Boeing would be required to pay market-based fees, costs, and expenses in defending that litigation. Article 11.3 provides that in this situation, the State, not Boeing, will pay those fees, costs, and expenses. Thus, Boeing has obtained an insurance-like commitment from the State for nothing in return. As such, it has received a benefit within the meaning of Article 1.1(b) of the SCM Agreement. The fact that "Washington has not agreed to pay any damages or other potential liability to Boeing under the {Master Site} Agreement" does not change the fact that the commitment the State *has* made in Article 11.3 confers a benefit on Boeing. Moreover, that Article 11.3 was, in the United States' view, motivated by the State's self interest also does not change the fact that by the terms of Article 11.3, Boeing is receiving something for free that it could not get on the market without paying adequate consideration.[1962]

[1958] European Communities' first written submission, para. 203.
[1959] European Communities' second written submission, para. 123.
[1960] European Communities' response to question 244, paras. 443-444.
[1961] European Communities' first written submission, paras. 204-207.
[1962] European Communities' second written submission, paras. 124-125.

7.630 The European Communities argues that Washington State's agreement to assume Boeing's litigation costs related to the MSA is specific within the meaning of Article 2.1(a) of the SCM Agreement because it is part of an agreement specifically between Boeing and the State of Washington. The MSA explicitly states that the State will cover the litigation costs related to the Agreement only for the Project Olympus SLGs or Boeing. Thus, the provision of these incentives is specific because the State of Washington has explicitly limited access to these incentives to Boeing under the terms of the MSA. Should the Panel consider Washington State's agreement to assume litigation costs not to be specific under Article 2.1(a) of the SCM Agreement, it is nonetheless de facto specific under Article 2.1(c). The MSA makes it clear that Boeing is the only party other than the Project Olympus SLGs that will benefit from the State's guarantee against litigation costs. Further, the history of "The Boeing Incentive Package" illustrates that this litigation risk insurance policy was intended to directly benefit Boeing's LCA production. Indeed, Boeing will be the predominant beneficiary thereof.[1963]

Arguments of the United States

7.631 The United States argues that Article 11.3 of the MSA is not a subsidy. Boeing receives no financial contribution under Article 11.3 of the MSA, which calls for the State or local government to "assume the entire defense of such proceedings, including all fees, costs and expenses whatsoever relating thereto". Contrary to the argument of the European Communities, Article 11.3 does not require Washington State to "transfer funds covering the fees, costs, and expenses of the litigation to Boeing" for costs that Boeing may choose to independently incur. The MSA gives Boeing the right to retain its own counsel and intervene on its own behalf in any litigation. Article 11.3 is also not a "litigation risk insurance policy" as it pertains exclusively to the State's defense of a legal proceeding and not to the cost of any potential damages or liability that may result. The United States observes that Washington has not engaged in any legal proceedings under the MSA on behalf of Boeing or itself, and that the State also does not expect such proceedings in the future.[1964]

7.632 The United States argues that Article 11.3 of the MSA is not a potential direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement. Article 11.3 provides that in the event of litigation challenging provisions of the MSA, the State of Washington will control the defense of such litigation. To the extent that Boeing seeks to intervene in such litigation, it may exercise its right to do so, but Article 11.3 does not require the State to fund Boeing's litigation costs nor does the State intend to do so. In fact, the intent of Article 11.3 was to protect the State's self-interest in controlling the defense in any litigation challenging the MSA. A potential direct transfer of funds exists under Article 1.1(a)(1)(i) if a direct transfer of funds is assured in the event of certain defined circumstances. Since Article 11.3 does not assure Boeing a direct transfer of funds under any circumstances, there is no potential direct transfer of funds within the meaning of the SCM Agreement.[1965]

7.633 The United States rejects the European Communities' argument that the benefit to Boeing under Article 11.3 of the MSA is the amount "of premium Boeing would be required to pay each year to ensure against such litigation risk in the market". The United States maintains that Article 11.3 is not a litigation risk insurance policy because Washington has not agreed to pay any damages or other potential liability to Boeing under the MSA. Furthermore, the United States asserts that the provisions in Article 11.3 are motivated by the State's self-interest, rather than a benefit to Boeing. In

[1963] European Communities' first written submission, paras. 208-209, European Communities' second written submission, para. 126.
[1964] United States' first written submission, para. 573.
[1965] United States' response to question 244, paras. 405-406.

the event of litigation challenging the MSA and related legislation or agreements, independent of Article 11.3, the State would defend the MSA and related legislation.[1966]

7.634 The United States argues that because there is no subsidy to Boeing, specificity is not at issue.[1967]

Evaluation by the Panel

7.635 The parties disagree as to whether Article 11.3 of the MSA gives rise to a financial contribution in the form of a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement, which confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. With respect to whether Article 11.3 of the MSA gives rise to a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i), the key issue in dispute is whether Article 11.3 reflects a commitment by the State of Washington or its designee that if a particular event occurs, it will make a direct transfer of funds to Boeing.

7.636 The Panel notes in this regard that the European Communities has argued that Article 11.3 of the MSA requires the State of Washington "to pay all costs *incurred by Boeing* for any legal proceedings that may arise relating to the Agreement", that "{s}hould Boeing be involved in any litigation relating to the Project Olympus Master Site Agreement, the State of Washington is required *to transfer funds covering the fees, costs, and expenses of the litigation to Boeing*", and that "the fact that the State must provide Boeing with a remedy of equivalent economic effect *if it cannot cover Boeing's litigation costs* further demonstrates that there is a potential direct transfer of funds in connection with this litigation risk insurance policy..."[1968] This argument suggests that the direct transfer of funds which according to the European Communities' interpretation of Article 11.3 will occur if any third party or parties institute MSA-related legal proceedings against Boeing, is a direct transfer of funds to Boeing to cover costs incurred by Boeing.

7.637 The Panel considers that the European Communities has not demonstrated that Article 11.3 of the MSA provides for this type of direct transfer of funds to Boeing. Article 11.3 of the MSA provides that if any third party or parties institute any legal proceedings relating to the MSA against any of the Public Parties and/or Boeing, Washington State[1969] "shall assume the entire defense of such proceedings, including all fees costs and expenses whatsoever relating thereto". The "fees, costs and expenses whatsoever relating thereto" would appear to be the fees, costs and expenses *incurred by Washington State* in respect of Washington State's assumption of "the entire defense of such proceedings". The Panel sees nothing in this provision requiring Washington State to pay fees, costs and expenses *incurred by Boeing* in respect of such a proceeding. Therefore, the Panel considers that there is no basis for the view that Article 11.3 provides that if a certain event occurs Washington State will make a direct of transfer of funds to Boeing to cover costs incurred by Boeing in connection with certain MSA-related legal proceedings.

7.638 In addition to the terms of Article 11.3 of the MSA, the immediate context of that provision also suggests to us that the "fees, costs and expenses whatsoever relating thereto" would appear to be the fees, costs and expenses *incurred by Washington State* in respect of *Washington State's* assumption of "the entire defense of such proceedings". In this regard, we recall that the final sentence of Article 11.3 provides that the State's (or such other SLG) obligations pursuant to Section 11.3 "shall be subject to the terms and conditions set forth in Section 11.3.1 to Section 11.3.4." The focus of the terms and conditions set forth in Section 11.3.1 through

[1966] United States' first written submission, para. 575.
[1967] United States' first written submission, para. 576.
[1968] European Communities' first written submission, paras. 201-202 (emphasis added).
[1969] Or such other SLG as Washington State may designate.

Section 11.3.4 is on the manner in which *Washington State* (or such other SLG) would conduct such a defense. For example, Article 11.3.1 requires Washington State (or such other SLG) to notify Boeing in writing of any such legal proceedings, to vigorously undertake the defense in such proceedings, to consult with Boeing on various issues, and to not object to "intervention" by Boeing in "such proceedings". Article 11.3.2 provides, among other things, that the State (or such applicable SLG) may not make any settlement or abandon any litigation without prior consultation with Boeing.

7.639 For these reasons, the Panel finds that the European Communities has not demonstrated the existence of a financial contribution in the form of a potential direct transfer funds to Boeing to cover costs incurred by Boeing.

7.640 The Panel notes that in its second written submission the European Communities argues that if a third party or parties bring legal proceedings against Boeing relating to the MSA, Washington State is required to pay all fees, cost and expenses "relating to defending that litigation".[1970] It is possible that the statement of the European Communities that the fees, costs and expenses to be assumed by Washington State are fees, costs and expenses "relating to defending that litigation" refers to fees, costs and expenses *incurred by Washington State* rather than by Boeing.[1971] If so, this argument would seem to be somewhat different from the argument advanced in the European Communities' first written submission that Article 11.3 of the MSA contemplates that Washington State will transfer funds to Boeing corresponding to costs incurred by Boeing. If the European Communities' interpretation of Article 11.3 of the MSA is that it provides that if a defined event occurs Washington State is obligated to pay fees, costs and expenses that *it* incurs when *it* assumes the defense of MSA-related legal proceedings against Boeing, the Panel considers that, as explained above, the text of Article 11.3 of the MSA supports that interpretation. However, the Panel considers that the European Communities has not provided sufficient reasoning to demonstrate that in the event that Washington State covers the costs *it* incurs in connection with *its* defense of MSA-related legal proceedings against Boeing, this would amount to a direct transfer of funds to Boeing. Thus, the Panel considers that the European Communities has not demonstrated that Article 11.3 of the MSA gives rise to a potential direct transfer of funds.

7.641 In sum, the Panel finds that, on the one hand, if the argument of the European Communities is that Article 11.3 of the MSA means that if a defined event occurs Washington State will be required to make a direct transfer of funds to Boeing to cover costs incurred by Boeing in connection with MSA-related legal proceedings, the European Communities has not substantiated that assertion. On the other hand, if the argument of the European Communities is that Article 11.3 requires Washington State to assume costs, fees and expenses that Washington State incurs when assuming the defense of MSA-related legal proceedings against Boeing, the European Communities has not demonstrated that this gives rise to a potential transfer of funds to Boeing. The Panel notes that the European Communities does not advance arguments as to how Article 11.3 could be found to constitute a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement other than in the form of a potential direct transfer of funds.

[1970] The European Communities also observes, in this regard, that its "claim is not about paying for any litigation costs independently incurred by Boeing or about paying any potential damages or liability to Boeing, but rather about *paying to defend Boeing in potential litigation* brought by third parties relating to the Project Olympus MSA". European Communities' second written submission, paras. 122-123 (emphasis added). Similarly, in its response to a question from the Panel, the European Communities argues that Article 11.3 of the MSA "mandates the State or its designee to pay for the fees, costs, and expenses incurred *in defending against legal proceedings brought by a third party*, should such proceedings arise." (emphasis added).

[1971] See also, European Communities' comments on United States' response to question 244, para. 345.

BCI deleted, as indicated **[***]**

Conclusion

7.642 **For these reasons, the Panel finds that the European Communities has not demonstrated that Article 11.3 of the MSA constitutes a financial contribution in the form of a potential direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. Therefore, the Panel also finds that the European Communities has not demonstrated that Article 11.3 of the MSA constitutes a subsidy within the meaning of Article 1 of the SCM Agreement.**

(ix) Summary of conclusions regarding the alleged Project Olympus Master Site Agreement subsidies pursuant to "The Boeing Incentive Package"

7.643 The foregoing analysis and conclusions addressed the question of whether the following measures provided for in the MSA in connection with Project Olympus constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement:

(a) the I-5 and SR 527 expansion projects, the construction of a rail-barge transfer facility and the expansion of the South Terminal by the Port of Everett;

(b) the waiver of 747 LCF landing fees at Paine Field;

(c) the freezing of rates charged to Boeing for certain utility services;

(d) the provision of coordinators in connection with Project Olympus;

(e) job training incentives in the form of a workforce development programme and the provision of an Employment Resource Center;

(f) tax and other incentives related to the 747 LCF;

(g) the assumption by Washington State of costs of MSA-related legal proceedings.

7.644 For the foregoing reasons, the Panel finds that the workforce development programme and the Employment Resource Center provided for in the MSA constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement. The Panel estimates that the amount of these subsidies to Boeing's LCA division over the period 1989-2006 is $11 million.

7.645 For the foregoing reasons, the Panel finds that the European Communities has not demonstrated that the following measures constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement: (i) the I-5 and SR 527 expansion projects, the construction of a rail-barge transfer facility and the expansion of the South Terminal by the Port of Everett; (ii) the waiver of 747 LCF landing fees at Paine Field; (iii) the alleged commitment made by the City of Everett and Snohomish County to freeze utility rates charged to Boeing; (iv) the provision of coordinators pursuant to the MSA; (v) tax and other incentives related to the 747 LCF; and (vi) the assumption by Washington State of costs of MSA-related legal proceedings.

3. State of Kansas and municipalities therein

(a) Tax breaks arising from the issuance of Industrial Revenue Bonds

(i) Introduction

7.646 The European Communities contends that certain tax exemptions arising from the issuance of "Industrial Revenue Bonds" ("IRBs") in the State of Kansas and municipalities therein constitute the

foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement, that they confer a benefit and that they are de facto specific to certain enterprises. Where the tax exemptions are not directly received by Boeing, the European Communities argues that the benefit "passes-through" to Boeing. The European Communities estimates that the amount of the benefit to Boeing's LCA division arising from the IRBs is at least $784 million from 1989 to 2019.

7.647 The United States' principal argument against the European Communities' case in relation to the tax exemptions is that they are not specific within the meaning of Article 2 of the SCM Agreement. Further, the United States argues that any benefit to companies other than Boeing did not pass-through to Boeing.

(ii) The measure at issue

7.648 The European Communities argues that the State of Kansas has granted subsidies to Boeing's LCA division, in the form of tax abatements, through an IRB programme.

7.649 Relevant background to the European Communities' submissions is that Boeing Commercial Airplanes, Wichita Division ("Boeing Wichita") produced commercial airplanes and their components in Wichita, Kansas, for over 70 years. On 16 June 2005, Boeing sold its Boeing Wichita facilities to another company, which is now known as Spirit Aerosystems ("Spirit").[1972]

7.650 The European Communities submits that the amount of tax abatements to Boeing under the IRB scheme is at least $784 million in the period 1989-2019. This figure includes $643 million in tax abatements granted directly to Boeing and $141 million in tax abatements to Spirit, which the European Communities argues have "passed-through" to Boeing.

7.651 IRBs are issued by cities and counties in Kansas, on behalf of private entities, in order to assist in raising revenue to fund the purchase, construction or improvement of various types of industrial and commercial property ("the Project Property").[1973]

7.652 The relevant state law which grants cities in Kansas the authority to issue IRBs is Kansas Statutes Annotated ("KSA") section 12-1740 et seq. KSA section 12-1741 provides:

> "{A}ny city shall have the power to issue bonds, the proceeds of which shall be used for the purpose of paying all or part of the cost of purchasing, acquiring, constructing, reconstructing, improving, equipping, furnishing, repairing, enlarging or remodeling facilities for agricultural, commercial, hospital, industrial, natural resources, recreational development and manufacturing purposes. Any city shall also have the power to enter into leases or lease purchase agreements by ordinance with any person, firm or corporation for the facilities." [1974]

7.653 In general, the relevant city, which in the case of Boeing and Spirit is the City of Wichita, acts as the "issuer" of the IRBs. The IRBs are sold to the general public for proceeds that the private entity, on whose behalf the IRBs are issued, uses to acquire or enhance Project Property. During the term of the IRB, legal title to the Project Property remains with the issuer (i.e. the City). The private entity leases the property, making rent payments to the holders of the IRBs that are sufficient to pay

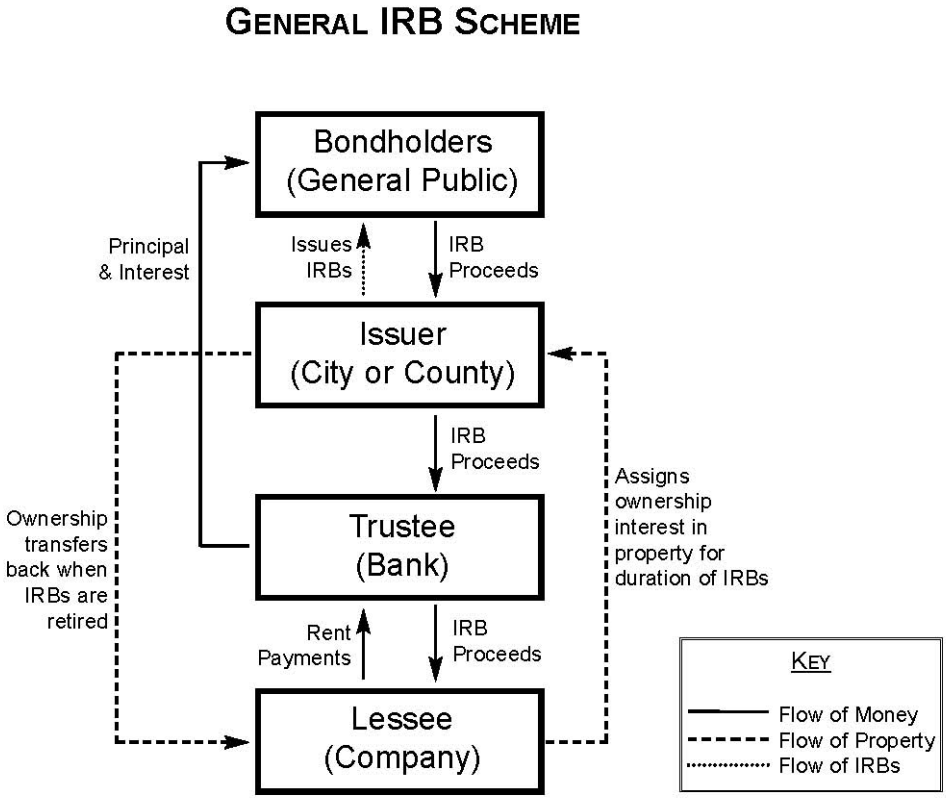
[1972] European Communities' first written submission, para. 286.
[1973] European Communities' first written submission, para. 286.
[1974] Kan. Stat. Ann. § 12-1740 *et seq.* (2001), Exhibit EC-167.

BCI deleted, as indicated **[***]**

the principal and interest on the IRBs. At the end of the term of the IRB, title to the Project Property transfers to the private entity involved.[1975]

7.654 The IRB issuance process involves a number of steps, including the issuer's city council approving a letter of intent ("LOI"), expressing the issuer's will to issue the IRBs on behalf of the private entity involved, subject to negotiated conditions.[1976] The authority for the actual issuance comes from a Bond Ordinance, which is adopted by the issuer's city council.[1977]

7.655 The European Communities submits the following diagram to assist in understanding the operation of the "IRB scheme":



7.656 For a private entity, the advantages of having IRBs issued on its behalf include:

(a) The ability to borrow funds at lower than market interest rates, due to tax-exempt interest;

(b) Property tax abatements for up to 10 years on Project Property; and

(c) Sales tax exemptions on Project Property and services acquired with the proceeds of IRBs.[1978]

[1975] See European Communities' first written submission, Annex A, paras. 4-8.
[1976] European Communities' first written submission, Annex A, paras. 14-15.
[1977] European Communities' first written submission, Annex A, paras. 14-15.
[1978] European Communities' first written submission, para. 298.

BCI deleted, as indicated **[***]**

7.657 The authority for the latter two benefits arises from KSA section 79-201a, which provides that all IRB-financed real property shall be exempt from state and local property taxes for a period of up to 10 years, and from KSA section 79-3640, which provides that tangible personal property and services acquired with IRB proceeds shall be exempt from all sales taxes.[1979]

7.658 The operation of the IRBs that have been issued to Boeing and Spirit by the City of Wichita is slightly different to the general scheme outlined in the preceding paragraphs. In particular, rather than being purchased by the public, the IRBs issued on behalf of Boeing or Spirit are purchased by these companies themselves.[1980] This results in a circular flow of money, from Boeing (or Spirit) to the City, in the purchase of the IRBs, and from the City back to Boeing (or Spirit) to fund purchase of Project Property.[1981] As Boeing or Spirit own the IRBs, any principal or interest payments are payments the companies make to themselves. Therefore, Boeing and Spirit do not use the IRBs in order to receive an injection of funds to finance the acquisition of property. Rather, the advantages of the IRB issuances to Boeing and Spirit are limited to the property tax and the sales tax exemptions.[1982] It is the tax breaks to Boeing, including those that "pass-through" from Spirit to Boeing, which arise from the IRBs issued by the City of Wichita, that the European Communities challenges. The European Communities does not challenge any other aspects of the IRB transactions.[1983]

7.659 In its first written submission, the European Communities provides detailed information regarding the timing and the manner in which IRBs have been issued to Boeing and Spirit.[1984]

7.660 According to the European Communities, the City of Wichita has issued Boeing Wichita with IRBs every year since 1979. The European Communities provides a table of the IRB issuances which it claims result in the subsidies to Boeing in the form of tax abatements that are under challenge in this dispute. The table identifies IRBs issued directly to Boeing, over three different time periods, and IRBs issued to Spirit.

[1979] European Communities' first written submission, Annex A, para. 9.
[1980] European Communities' first written submission, Annex A, para. 19.
[1981] European Communities' first written submission, Annex A, para. 22.
[1982] European Communities' first written submission, para. 312.
[1983] European Communities' first written submission, para. 318.
[1984] See European Communities' first written submission, paras. 293-317.

BCI deleted, as indicated **[***]**

IRB Recipient	IRBs Issued	Tax Benefit Period	Financial Contribution	Benefit
Boeing	**Pre-1995** (prior to sale of Boeing Wichita)	**Pre-2005** (prior to sale of Boeing Wichita)	**Boeing** (Boeing leases the property and owns the bonds; no other entity is involved)	**Boeing LCA** (based on LOI, Bond Ordinance, and Project Property)
Boeing	**1995-2004** (prior to sale of Boeing Wichita)	**1996-2004** (prior to sale of Boeing Wichita)	**Boeing** (Boeing leases the property and owns the bonds; no other entity is involved)	**Boeing LCA** (based on LOI, Bond Ordinance, and Project Property)
		2005-2014 (after sale of Boeing Wichita)	**Boeing** (Boeing subleases property to Spirit, while maintaining leasehold interest; Boeing owns the bonds)	**Boeing LCA** (based on LOI, Bond Ordinance, and Project Property)
Boeing	**2005-** (after sale of Boeing Wichita)	**2006-** (after sale of Boeing Wichita)	**Boeing** (Boeing leases the property and owns the bonds; no other entity is involved)	**Boeing LCA** (based on LOI and Project Property)
Spirit	**2005-** (after sale of Boeing Wichita)	**2006-** (after sale of Boeing Wichita)	**Spirit** (Spirit leases the property and owns the bonds)	**Boeing LCA** (based on Project Property and transaction consideration, particularly fixed-price long-term supply agreements with Boeing Commercial Airplanes)

7.661 The first row of the above table identifies IRBs issued to Boeing, where the term of the IRBs, and therefore the tax exemptions, expired prior to the sale of Boeing Wichita to Spirit in 2005.[1985]

7.662 The second row identifies IRBs issued to Boeing prior to the sale to Spirit, but where the term of the IRBs, and the tax exemption period, continue post-2005. In relation to these IRBs, Boeing continues directly to receive the tax benefits deriving from the IRBs because Boeing maintained its leasehold interest in the Project Property, rather than selling it to Spirit. It subleases the Project Property to Spirit.[1986]

7.663 The third row identifies IRBs issued to Boeing following the sale to Spirit in 2005. Despite the sale, the City of Wichita has continued to issue IRBs to Boeing. According to the European Communities, the Project Property associated with these issuances is used by Boeing to continue building LCA parts on its old Boeing Wichita facilities.[1987] Therefore, the tax abatements

[1985] See European Communities' first written submission, para. 299, Figure 3.
[1986] European Communities' first written submission, para. 311.
[1987] European Communities' first written submission, paras. 308-310. The European Communities cites an exhibit listing the Project Property for a 2005 IRB issuance to Boeing. The list is preceded by a statement that Boeing may locate and use the Project Property "on real property either owned by The Boeing Company or owned by Spirit Aerosystems Inc" (Exhibit A to the Boeing IRB Lease Agreements from 1994-2005, Exhibit EC-187). According to the European Communities, this suggests that Boeing uses the Project Property to continue building LCA parts on its old Boeing Wichita facilities. The European Communities states that this is confirmed by the fact that Boeing continues to own and furnish tooling at Spirit's facilities in Wichita to help Spirit manufacture parts for Boeing LCA.

arising from the IRB issuances to Boeing, after the sale to Spirit, continue to benefit Boeing's LCA division.[1988]

7.664 The final row of the table identifies IRBs issued to Spirit after the sale of Boeing Wichita. The European Communities argues that the benefit of the tax abatements arising from the IRBs issued to Spirit has "passed-through" to Boeing.[1989]

(iii) Terms of reference: future measures

Arguments of the United States

7.665 The United States argues that a "future measure" is a measure "not in existence at the time of Panel establishment" and that all such measures are outside a panel's terms of reference.[1990]

7.666 To provide context to the United States' allegation that the European Communities is attempting to include "future measures" within its claim, we note that the following sequence of events occurred in the period 2005-2006:

(a) 17 May 2005: the City of Wichita issued a letter of intent ("the 2005 LOI") indicating its intention to issue Spirit $1 billion in IRBs over a period of five years;

(b) 16 June 2005: Boeing sold its Boeing Wichita facility to the company now known as Spirit;

(c) December 2005: Pursuant to the 2005 LOI, the City of Wichita issued IRBs to Spirit to the value of $80 million;

(d) January 2006: the European Communities requested establishment of a Panel in this dispute; and

(e) November 2006: Pursuant to the 2005 LOI, the City of Wichita issued IRBs to Spirit to the value of $252 million.

7.667 The United States contends that the second set of IRBs issued by the City of Wichita to Spirit in November 2006 are "future measures". The United States asserts that the European Communities is not challenging the State of Kansas' IRB statute. Rather it is challenging a series of actions taken by the Wichita City Council pursuant to the IRB statute.[1991] The second set of IRBs was issued to Spirit when the Wichita City Council passed a city ordinance in November 2006, after the request for the establishment of the Panel.[1992]

7.668 In addition to arguing that the IRBs issued to Spirit under the November 2006 ordinance are outside the Panel's terms of reference, the United States also submits that "any other IRBs that the Wichita City Council may choose to issue to Spirit in the future pursuant to new city ordinances that it may pass are also future measures that are outside the Panel's terms of reference".[1993] In calculating the amount of the tax abatements arising from the IRBs, the European Communities operates on the assumption that the 2005 LOI to Spirit will be fully utilized. Therefore, in its quantification, the European Communities also includes tax abatements arising from IRBs it assumes will be issued to

[1988] European Communities' first written submission, paras. 308-310.
[1989] European Communities' first written submission, para. 316.
[1990] United States' response to question 12, para. 23.
[1991] United States' response to question 12, para. 24.
[1992] United States' response to question 12, para. 24.
[1993] United States' response to question 12, para. 24.

Spirit between 2006-2009 (i.e. within the term of the LOI, but after the request for establishment of the Panel). There is also a 1999 LOI expressing an intent to issue IRBs to Boeing over a period of ten years. The European Communities assumes that the value of this LOI will also be fully utilized because in the past Boeing has always taken full advantage of its LOIs. [1994] Therefore, the European Communities includes in its quantification tax abatements arising from IRB issuances that it assumes will occur between 2006-2009 pursuant to the 1999 LOI. Given that the United States challenges as future measures "any other IRBs that the Wichita City Council may choose to issue to Spirit in the future pursuant to new city ordinances", the United States contests the inclusion within the Panel's terms of reference of the future IRB issuances under the 2005 and 1999 LOIs, which are predicted by the European Communities.

Arguments of the European Communities

7.669 The European Communities "generally agrees" with the United States' definition of a future measure.[1995] The European Communities defines it as a "measure that was not in existence and/or not committed to at the time the Panel was established".[1996] However, the European Communities argues that none of the measures in issue in this dispute are future measures. In any event, future measures are not necessarily excluded from a panel's terms of reference.[1997]

7.670 According to the European Communities, the United States is incorrect in asserting that IRBs issued to Spirit from November 2006 onwards are future measures. The European Communities asserts that "individual IRB ordinances enacted by the Wichita City Council are not the only measures at issue in this dispute when it comes to the European Communities' challenge to the City of Wichita IRBs".[1998] With respect to the IRBs issued to Spirit, the European Communities challenges all property and sales tax abatements provided to Spirit pursuant to KSA section 79-201a, KSA section 79-3606 and KSA section 79-3640 (the sections of the Kansas legislation providing for tax abatements for Project Property), as a result of IRBs issued to Spirit pursuant to KSA sections 12-1740 *et seq*, under the authority of the 2005 LOI issued by the Wichita City Council.[1999] The 2005 LOI and each of the cited KSA provisions were properly referenced in the panel request and were measures in existence prior to the request for establishment of a Panel. Therefore, according to the European Communities, all the property and sales tax abatements provided to Spirit as a result of IRBs issued under the authority of the 2005 LOI are properly within the Panel's terms of reference, whether or not the actual IRB issuance took place before or after the Panel was established.[2000]

7.671 Even if the second set of IRBs issued to Spirit were "future measures", the European Communities asserts that they are not outside the Panel's terms of reference. The European Communities relies on the Appellate Body's statement in *EC – Chicken Cuts* in this regard:

> "The term 'specific measures at issue' in Article 6.2 suggests that, as a general rule, the measures included in a Panel's terms of reference must be measures that are in existence at the time of the establishment of the Panel. *However, measures enacted*

[1994] Under the LOIs, the City of Wichita expresses an intent to issue IRBs to the company in question up to a certain value. The IRBs are then granted in a series of separate issuances, up until the value of IRBs cited in the LOI is reached.

[1995] European Communities' comments on United States' response to question 12, para. 29.

[1996] European Communities' response question 12, para. 37.

[1997] European Communities' response question 12, para. 38 and European Communities' comments on United States' response to question 12, para. 29.

[1998] European Communities' comments on United States' response to question 12, para. 32.

[1999] European Communities' comments on United States' response to question 12, para. 32.

[2000] European Communities' comments on United States' response to question 12, para. 32.

> *subsequent to the establishment of the Panel may, in certain limited circumstances, fall within a Panel's terms of reference*." [2001]

7.672 The European Communities also relies on a line of authority relating to the inclusion of measures within a panel's terms of reference where the measures are not explicitly mentioned in the panel request, but are closely related to measures that are so mentioned and the respondent party has adequate notice of the scope of the claims against it.[2002] The European Communities argues that the United States was on notice that the challenge in this dispute encompassed each IRB issuance made to Spirit pursuant to the 2005 LOI. The LOI itself indicated that the Wichita City Council intended to issue IRBs to Spirit in "an amount not to exceed $1,000,000,000…for a period of five years, ending May 17 2010".[2003] Further, each IRB issuance to Spirit is identical in structure and effect to the annual IRB issuance made to Boeing every year since 1979. Therefore, the European Communities argues that the Spirit IRB ordinances enacted under the 2005 LOI are "so closely related" to the IRB ordinances enacted prior to the establishment of the Panel, that they must be within the Panel's terms of reference.[2004]

Evaluation by the Panel

7.673 The issue between the parties is whether the set of IRBs issued by the City of Wichita to Spirit in November 2006 is within the terms of reference of the Panel. The United States contends that the IRBs are "future measures" and therefore cannot be considered by the Panel. The United States also argues that the IRB issuances that the European Communities expects to occur under future ordinances, between 2007-2009 under the existing 1999 and 2005 LOIs, are outside the Panel's mandate.

7.674 Therefore, the issue before us is whether ordinances that post-date the request for establishment of the Panel are "future measures" and therefore outside its terms of reference. This is a separate issue to whether or not all measures were specifically identified in the panel request in accordance with Article 6.2 of the DSU, which is not challenged by the United States.

7.675 There is disagreement between the parties regarding the measure that is under challenge in relation to the IRBs issued to Spirit in November 2006. The United States submits that "the EC is not challenging the State of Kansas' IRB statute. Rather it is challenging a series of actions taken by the Wichita City Council pursuant to the IRB statute".[2005] In contrast, the European Communities argues that:

> "With regard to Spirit IRBs, what the European Communities challenges in this dispute are all property and sales tax abatements provided to Spirit pursuant to KSA §79-201a, KSA §79-3606, and KSA §79-3640, as a result of IRBs issued to Spirit pursuant to KSA §§12-1740 *et seq,* under the authority of the 17 May 2005 letter of intent issued by Wichita City Council." [2006]

7.676 Therefore, the European Communities argues that the measures it is challenging in relation to the IRBs issued to Spirit in November 2006 (and beyond) are the relevant Kansas statutory provisions, the 2005 LOI and the tax abatements provided pursuant to these measures.

[2001] European Communities' comments on United States' response to question 12, para. 33 (emphasis added).
[2002] European Communities' comments on United States' response to question 12, paras. 33 and 34.
[2003] European Communities' comments on United States' response to question 12, para. 34.
[2004] European Communities' comments on United States' response to question 12, para. 34.
[2005] United States' response to question 12, para. 24.
[2006] European Communities' comments on United States' response to question 12, para. 32.

BCI deleted, as indicated **[***]**

7.677 The panel request submitted by the European Communities provides, relevantly:

> "This dispute concerns prohibited and actionable subsidies provided to and benefiting the US producers of large civil aircraft (the US LCA industry)…The measures are currently reflected in and derive from the following:
>
> 1. State and Local Subsidies
>
> US States and local authorities…transfer in various ways economic resources to the US LCA industry.
>
> These economic resources include numerous financial incentives and other advantages effectuated, for example, through tax breaks, bond financing…
>
> …
>
> b) State of Kansas
>
> Governmental authorities in the State of Kansas,…provide incentives, including bond financing, tax benefits and other advantages, to the US LCA industry, *inter alia*, through the following:
>
> …
>
> -- Property and sales tax abatements pursuant to KSA §79-201a, as amended, KSA §79-3606, as amended, and KSA §79-3640, as amended, associated with Industrial Revenue Bonds…issued for the financing of US LCA industry projects by the City of Wichita pursuant to KSA §§12-1740 *et seq,* including, but not limited to, those authorized by the following Ordinances of the Wichita City Council:
>
> - Wichita City Council Ordinance No. 46-818 authorizing $80 million in IRBs for Spirit Aerosystems, Inc., dated 15 November 2005;
>
> - {Followed by a list of another 15 such Ordinances}
>
> …
>
> Letters of intent for IRBs for the US LCA industry, including, but not limited to, those issued pursuant to actions of the Wichita City Council taken on 17 May 2005, 13 July 2004, 9 November 1999." [2007]

7.678 The provisions of the KSA referred to in the European Communities' panel request, and which it relies upon as the measures under challenge, are the provisions which authorize cities to issue IRBs and which provide for property and sales tax exemptions on property financed with IRB proceeds. The 2005 LOI expresses the intent of the City of Wichita to issue up to $1 billion in IRBs, subject to the final approval of the terms of the ordinance and other related documents. The issue before us is whether challenging these measures has the result that the set of IRBs issued in November 2006, and the IRBs the European Communities assumes will be issued up until 2009 (under the 1999 and 2005 LOIs), fall within the terms of reference of the Panel.

[2007] Request for Establishment of a Panel by the European Communities, WT/DS353/2.

BCI deleted, as indicated **[***]**

Prior cases to have considered this issue

7.679 In order to resolve the issue raised by the parties, the Panel needs to identify the "measure at issue" in relation to the November 2006 IRB issuance (and the other predicted IRB issuances) and to decide whether it is within the Panel's terms of reference. In this regard, it is useful to review the way in which previous panel and Appellate Body reports have dealt with similar issues relating to "future measures".

7.680 The Appellate Body has held that, as a general rule, to be within a panel's terms of reference, a measure must be in existence at the time of establishment of the panel.[2008] This general rule has been applied in a number of cases, including by the panel in *US – Upland Cotton*. In that case, the panel held that the *Agricultural Assistance Act* of 2003, which was not enacted until after the request for establishment of a panel, was not within its terms of reference.[2009] The panel reasoned that at the time of the panel request, the *Agricultural Assistance Act* "did not exist, had never existed and might not subsequently have ever come into existence".[2010] Brazil's claim in relation to the legislation was "entirely speculative".[2011] The panel noted that the legislation could not be considered to be an amendment to, or a measure implementing, any of the measures within the panel's terms of reference.[2012] The Appellate Body recently noted that this finding was never appealed.[2013]

7.681 The Appellate Body has recognized that there are exceptions to the general rule that a measure must be in existence at the time of establishment of the panel. In *EC – Chicken Cuts,* the Appellate Body noted:

> "The term 'specific measures at issue' in Article 6.2 suggests that, as a general rule, the measures included in a Panel's terms of reference must be measures that are in existence at the time of the establishment of a Panel. However, measures enacted subsequent to the establishment of the Panel may, in certain limited circumstances, fall within a Panel's terms of reference." [2014]

7.682 The most frequently applied exception is that relating to *amendments* to measures in existence at the time of a panel request. In *Chile – Price Band System*, the Appellate Body held that an amendment made to a measure after the request for establishment of the panel was within the panel's terms of reference. This was because the panel request was broad enough to cover the measure as amended, because the amendment did not change the essence of the measure as it existed at the time of the panel request and because it was necessary to consider the measure as amended in order to secure a positive solution to the dispute. Further, the panel noted that neither party objected to the inclusion within the panel's terms of reference of the measure as amended.[2015] This reasoning has been applied in a number of other disputes.[2016]

[2008] Appellate Body Report, *EC – Chicken Cuts,* para. 156.

[2009] Panel Report, *US – Upland Cotton,* paras. 7.157-1.171. For another example of a Panel ruling "future measures" outside its terms of reference, see Panel Report, *EC – Commercial Vessels*, where the Panel noted at para. 7.30 that even at the time of writing the report, the measures in question remained "hypothetical future measures".

[2010] Panel Report, *US – Upland Cotton,* para. 7.158.

[2011] Panel Report, *US – Upland Cotton,* para. 7.158.

[2012] Panel Report, *US – Upland Cotton,* para. 7.170.

[2013] Appellate Body Report, *US – Zeroing (Japan) (Article 21.5 - Japan),* para. 127.

[2014] Appellate Body Report, *EC – Chicken Cuts,* para. 156.

[2015] Appellate Body Report, *Chile – Price Band System*, paras. 135-144.

[2016] See e.g. Panel Report, *Colombia – Ports of Entry*, para. 7.52; Panel Report, *India – Additional Import Duties*, paras. 7.56-7.72; Appellate Body Report, *Brazil –Aircraft*, para. 132 and Panel Report, *Argentina – Footwear*, paras. 8.40-8.46.

7.683 In addition to the cases regarding amendments to measures within a panel's terms of reference, a limited number of panels have used other reasons to justify inclusion of a "future measure" within their terms of reference. In *US – Zeroing (Japan) (Article 21.5 - Japan)*, the panel held that an administrative review under the United States' anti-dumping system, that did not exist at the time of the panel request but that had been initiated, was within its terms of reference. The panel reasoned that, although the parties treated the administrative reviews as individual measures, they were part of a chain of measures or a continuum, the purpose of which was the ongoing assessment of anti-dumping duties under the same anti-dumping order. Each new administrative review superseded the previous one and the review in issue, although not itself in existence at the time of the panel request, formed a part of this existing chain. Given the existence of this "chain" and the fact that the review in issue had been initiated (although not completed) at the time of the panel request, the claim in relation to it was "entirely predictable", rather than "entirely speculative".[2017] The Appellate Body agreed that the measure was properly within the panel's terms of reference but tied its conclusion closely to the fact that the proceedings were compliance proceedings under Article 21.5.[2018]

7.684 In a similar manner, the panel in *Australia – Salmon (Article 21.5 - Canada)* included within its terms of reference a ban on the importation of salmon that was introduced by Australia after the panel's establishment. The panel held that, in the context of an Article 21.5 compliance panel, measures taken subsequently to the establishment of a panel should not *per force* be excluded from a panel's mandate.[2019] The panel's reasoning in this regard was closely linked to the nature of compliance proceedings. In particular, the panel stated that implementation is often an ongoing or continuous process and for this reason "there may be different and, arguably, even more compelling reasons to examine measures introduced during the proceedings".[2020] Therefore, the reasoning in this case appears largely to be confined to compliance panels established under Article 21.5 of the DSU.

7.685 In *EC – Selected Customs Matters*, the parties raised an issue regarding the "temporal limitations of the Panel's terms of reference".[2021] In this case, the Appellate Body held that the measures in issue were certain legal instruments identified in the panel request, and that the claim in relation to them was that they were not administered in a manner consistent with Article X:3(a) of the GATT 1994. In relation to acts of administration pre-dating and post-dating the request for establishment of the panel, the Appellate Body noted that such acts of administration were *evidence*, rather than the relevant *measures* in issue and therefore, there was no temporal limitation associated with the administrative acts that the panel could consider:

> "{I}t is important to distinguish between, on the one hand, the measures at issue and, on the other hand, acts of administration that have been presented as evidence to substantiate the claim that the measures at issue are administered in a manner inconsistent with Article X:3(a) of the GATT 1994. The Panel failed to make the distinction between *measures* and pieces of *evidence*. While there are temporal limitations on the measures that may be within a Panel's terms of reference, such limitations do not apply in the same way to evidence. Evidence in support of a claim challenging measures that are within a Panel's terms of reference may pre-date or post-date the establishment of the Panel." [2022]

[2017] Panel Report, *US – Zeroing (Japan) (Article 21.5 - Japan)*, para. 7.116.
[2018] Appellate Body Report, *US – Zeroing (Japan) (Article 21.5 - Japan)*, paras. 120-130.
[2019] Panel Report, *Australia – Salmon (Article 21.5 – Canada)*, para. 7.10, sub-paras. 27-28.
[2020] Panel Report, *Australia – Salmon (Article 21.5 – Canada)*, para. 7.10, sub-paras. 27-28.
[2021] Appellate Body Report, *EC – Selected Customs Matters*, paras. 177-189.
[2022] Appellate Body Report, *EC – Selected Customs Matters*, para. 188 (emphasis in original).

7.686 One of the preliminary rulings the panel was required to make in *US – Upland Cotton* is also relevant to the issues raised by the parties in the present dispute.[2023] In *US – Upland Cotton*, the United States argued that to the extent Brazil challenged cottonseed payments, as opposed to legal instruments "as such", payments made after the date of establishment of the panel were outside the panel's terms of reference. In that case, Brazil's panel request identified the legislation and the programmes under which the cottonseed payments were authorized. The panel noted that the legislative and regulatory provisions under which the payments were made entered into effect prior to the consultations and remained in place throughout the panel proceeding. Given that the relevant programmes and legislation were within the panel's terms of reference, the panel ruled that the payments made under those programmes and legislation, even if made after the date on which the panel was established, were within its terms of reference.[2024] The panel noted that "other considerations" also supported its conclusion. One such consideration was that Brazil's panel request specifically indicated that some of the payments at issue were provided in the past, some were currently being provided and others would be provided in the future. The panel noted that this put the respondent on notice that subsequent payments were in issue.[2025] The panel also held that the "evidence before a Panel is a separate issue from the measures within its terms of reference" and that it is not disputed that a panel may look at evidence that comes into existence after the date of the request for establishment of a panel.[2026]

Conclusion on the facts of this case

7.687 The European Communities argues that the measures under challenge are the tax abatements provided under the relevant Kansas legislation and the 2005 LOI. As a starting point for the analysis of whether the tax abatements arising due to the 2006 IRB issuance are within the Panel's terms of reference, we note that neither party contests that the relevant Kansas legislation cited in the panel request and the 2005 LOI are measures within the Panel's mandate. The case law reviewed above provides some guidance regarding whether the 2006 IRBs issued pursuant to these measures, and the IRBs the European Communities predicts will be issued between 2007-2009, are also within the Panel's terms of reference.

7.688 At first glance, it seems that the issuance of the 2006 IRBs (and the predicted issuance of IRBs in 2007-2009) are measures that come into existence after the panel request and therefore, according to the general rule in *EC – Chicken Cuts,* are outside the Panel's terms of reference. The series of cases in which "future measures", in the form of amendments to measures within a Panel's terms of reference, are treated as an exception to the general rule in *EC – Chicken Cuts,* does not seem applicable in the present case. The IRBs issued after the panel request, and the consequent tax abatements, are not readily characterized as modifications to existing measures and neither party attempts to argue that this is the case. Therefore, the reasoning in *Chile – Price Band System* does not advance our analysis. Further, given that the present case is not a compliance proceeding under Article 21.5, the reasoning used in *Australia – Salmon (Article 21.5 - Canada)* and *US – Zeroing (Japan) (Article 21.5 - Japan),* to incorporate a measure implemented after the establishment of the Panel, is not applicable.

7.689 In the present dispute, the legislation and the LOI under which the November 2006 IRBs were issued were in effect prior to the request for establishment of the Panel and were identified in the panel request. Therefore, the legislation and the LOI are within the Panel's terms of reference. KSA section 12-1740a, which is one of the provisions of the Kansas legislation referenced in the panel request, provides that a city council must issue an approved LOI before any IRBs may be

[2023] Panel Report, *US – Upland Cotton*.
[2024] Panel Report, *US – Upland Cotton*, para. 7.187.
[2025] Panel Report, *US – Upland Cotton*, paras. 7.188-7.189.
[2026] Panel Report, *US – Upland Cotton*, paras. 7.192-7.193.

issued. Further, the 2005 LOI issued by the City of Wichita expresses the intent of the City to issue IRBs (up to the value of $1 billion). Although the LOI is subject to various conditions and is not a firm commitment that the bonds will be issued, the LOI provides the conditional authority for the issuance of IRBs over a certain period of time (five years in the case of the 2005 LOI). Therefore, this is a case where there is particular legislation in operation in the State of Kansas, providing for the issuance of IRBs which give rise to tax advantages. The legislation is implemented via LOIs and both the legislation and the 2005 LOI were in existence at the time of the panel request and are undeniably within the Panel's terms of reference. In these circumstances, we find that the IRBs issued under the authority of these measures, even if after the time of the panel request, are within the Panel's terms of reference. Our conclusion finds support in one of the panel's preliminary rulings in *US – Upland Cotton*. In that case, payments made after the panel request, but authorized under legislation within the panel's terms of reference, were found to be within the panel's terms of reference. We also note that the LOIs referenced in the panel request conveyed the City' s intention to issue IRBs for a certain period of time into the future (e.g. for five years in the case of the 2005 LOI). This put the United States on notice that subsequent IRBs were in issue.

7.690 The effect of this reasoning is to include within the Panel's mandate IRBs that the European Communities predicted would continue to be issued to Boeing and to Spirit under existing LOIs, in years post-dating its written submissions. However, we do not consider this to be analogous to the "entirely speculative" claim referred to in one of the preliminary rulings in *US – Upland Cotton*. In *US – Upland Cotton,* there was no legislation or any other instrument in existence at the time of the panel request. Brazil was speculating about the future existence and content of such legislation. In the present dispute, at the time of the panel request there was legislation in existence, including measures implementing the legislation (LOIs). The 2005 LOI provided a clear indication of what further implementing action would occur in the future, namely the issuance of IRBs under ordinances. Although the LOI set a cap on the value of IRBs authorized under it, it was not possible to know in advance the value of IRBs to be issued under each future ordinance. However, we consider this to be relevant to the merits and the quantification of the European Communities' claim, rather than precluding us from considering the substance of the claim arising in relation to these IRBs.

7.691 For these reasons, the Panel finds that IRBs issued in November 2006 under the 2005 LOI, and subsequent IRB issuances under the 2005 LOI, are within the Panel's terms of reference. The Panel also finds that IRBs issued under the 1999 LOI are within the Panel's terms of reference.

(iv) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

Arguments of the European Communities

7.692 The European Communities argues that the state and local property and sales tax breaks granted to Boeing and Spirit through the issuance of IRBs are financial contributions under the SCM Agreement. In particular, the European Communities contends under the "IRB programme", the State, Sedgwick County, the City of Wichita and local school districts are required to forego tax revenue that they would otherwise have collected from Boeing and Spirit. This constitutes a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement.[2027]

7.693 The United States argues that there is no financial contribution associated with the IRBs because, as of July 2006, the State of Kansas no longer assesses property tax on commercial and industrial machinery and equipment, and as of July 2000 does not assess sales tax on such machinery and equipment. The European Communities rejects this argument. It notes that the property tax abatements on commercial and industrial machinery and equipment granted prior to July 2006 and the sales tax abatements on such machinery and equipment granted prior to July 2000 constitute financial

[2027] European Communities' first written submission, para. 319.

contributions under Article 1.1(a)(1)(ii) of the SCM Agreement. According to the European Communities, the United States does not dispute this.[2028]

7.694 Further, the change to the Kansas taxation legislation regarding property tax on commercial and industrial machinery and equipment states that only "commercial and industrial machinery and equipment *acquired … after June 30, 2006*" is exempt from property taxation.[2029] All such machinery and equipment acquired prior to this date is still taxed. Therefore, all commercial and industrial machinery and equipment acquired prior to June 2006 will continue to be exempt from property taxes for the term of the IRBs, namely for a period of 10 years. For example, property acquired in January 2006 is subject to property tax, but is exempt from it under the IRB scheme until January 2016.[2030]

7.695 The European Communities also refutes the United States' submission by noting that Boeing and Spirit have received, and will continue to receive, otherwise unavailable property tax breaks with respect to property that is not considered to be commercial or industrial machinery or equipment and which, but for the IRBs, is still subject to property taxes in Kansas.[2031] The same argument applies in relation to the improvement, repair and remodeling of commercial and industrial machinery and equipment because the change to Kansas law repeals property taxes only in relation to the *acquisition* of "commercial and industrial machinery and equipment". In contrast, IRBs provide property tax exemptions with respect to "*any* property constructed or purchased" with IRB proceeds".[2032]

7.696 The European Communities submits that the IRBs in issue have resulted in, and continue to result in, the foregoing of revenue otherwise due with respect to property taxes on all *real* property.[2033] Although the United States argues that the majority of property acquired by Boeing and Spirit with IRB funds was personal property, not real property, the European Communities argues that while this may be true, both companies nonetheless used a significant amount of the IRB proceeds to purchase real property. Further, given the change in the Kansas taxation law regarding commercial and industrial machinery and equipment, in the future it is likely that Boeing and Spirit will use an increased proportion of their IRB proceeds to purchase real property.[2034]

7.697 The European Communities argues that, despite the change in law regarding sales tax exemptions, effective in 2000, the State of Kansas and its subdivisions continue to forego sales tax revenue that would otherwise be due. Although the Kansas taxation legislation was amended so that sales tax is no longer assessed on commercial and industrial machinery and equipment, several types of machinery and equipment are excluded from this general sales tax exemption. This includes machinery and equipment used for non-production purposes, maintenance and repair equipment, certain office machines and equipment and certain building fixtures. According to the European Communities, these are all types of property that Boeing and Spirit purchase with their IRB proceeds.[2035] Indeed, in the May 2005 LOI for the issuance of IRBs to Spirit, the City of Wichita stated that the issuance would result in an estimated $2 million in sales tax exemptions for Spirit.[2036] Therefore, through the issuance of IRBs, the State of Kansas and its subdivisions forego sales tax revenue that would otherwise be due.

[2028] European Communities' second written submission, para. 214.
[2029] European Communities' second written submission, para. 218.
[2030] European Communities' second written submission, paras 217-218.
[2031] European Communities' second written submission, para. 219.
[2032] European Communities' second written submission, para. 219.
[2033] European Communities' second written submission, para. 221.
[2034] European Communities' second written submission, para. 222.
[2035] European Communities' second written submission, para. 223.
[2036] European Communities' second written submission, para. 223.

7.698 Finally, the European Communities concludes that Boeing and Spirit have every incentive to use their IRB proceeds toward the purchase of property other than commercial and industrial machinery and equipment. If it were not possible for Boeing and Spirit to receive tax abatements through the IRBs, they would not have bothered applying for IRB issuances in November 2006 to the value of $272 million.[2037] The United States acknowledges that the sole purpose of the IRB issuances to Boeing and Spirit is to provide the companies with property and sales tax breaks and that "there are transaction costs associated with a bond issuance".[2038] Therefore, the European Communities submits that this demonstrates that Boeing and Spirit continue to receive tax exemptions as a result of the IRB issuances, otherwise these companies would have no incentive to continue to apply for IRBs.[2039]

7.699 In relation to the existence of a benefit under Article 1.1(b) of the SCM Agreement, the European Communities argues that Boeing directly benefits from the tax breaks associated with all the IRBs issued by the City of Wichita on Boeing's behalf. Further, the European Communities submits that Boeing is the ultimate beneficiary of the tax breaks associated with the IRBs issued on Spirit's behalf, as the benefit passes-through from Spirit to Boeing.[2040] The European Communities' pass-through arguments are outlined in the section quantifying the amount of the Kansas measures, for the reasons expressed at paragraph 7.214 of this Report.

7.700 In relation to the tax breaks that are granted to Boeing and to Spirit, the European Communities notes that they lower the tax burden on property acquired and used by Boeing and Spirit in developing and producing parts for Boeing LCA. Further, the European Communities submits that the panel in *US – FSC* concluded that the foregoing of government revenue that would otherwise be due "clearly confers a benefit".[2041] The European Communities concludes:

> "In sum, these IRB-related tax breaks confer benefits on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement. That is, these tax breaks relate explicitly to the production of commercial aircraft and are ultimately provided to Boeing's LCA division on non-market terms." [2042]

Arguments of the United States

7.701 In its first written submission, the United States argues that, as of 1 July 2006, Kansas no longer assesses property tax on commercial and industrial machinery and equipment. Further, in 2000 Kansas stopped assessing sales tax on such machinery and equipment. Therefore, even without the IRBs, there would be no taxation revenue due to Kansas or its subdivisions on any commercial or industrial machinery or equipment, which represents most of the property that Boeing and Spirit have financed with IRBs.[2043] Most of Boeing's IRB proceeds have been used to finance personal rather than real property. The United States concludes:

> "{T}he vast majority of property acquired {with IRB proceeds} would be tax exempt in any event; no government revenue on this property is being foregone as a result of the IRBs. There is accordingly no financial contribution under Article 1.1(a)(1)(ii) with respect to the vast majority of property identified by the EC." [2044]

[2037] European Communities' second written submission, para. 214.
[2038] European Communities' second written submission, para. 214.
[2039] European Communities' second written submission, para. 214.
[2040] European Communities' first written submission, paras. 327-328.
[2041] European Communities' first written submission, para. 332.
[2042] European Communities' first written submission, para. 333.
[2043] United States' first written submission, para. 594.
[2044] United States' first written submission, para. 594.

7.702 In its response to a Panel question, the United States concedes that it does not contest that the general property tax exemption on machinery and equipment applies only to commercial and industrial machinery and equipment acquired after 30 June 2006.[2045] However, the United States submits that while the change in Kansas taxation law did not eliminate the incentive to apply for IRBs, it reduced it because most of the property acquired by Boeing with IRB proceeds has been property that is now tax exempt.[2046]

7.703 The United States does not seem to contest that there is a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement in relation to property acquired with IRB proceeds that, but for the IRBs, remains subject to property and to sales tax.

7.704 Finally, the United States repeats its argument that revenue to be foregone in the future "does not meet the definition of a financial contribution within the meaning of Article 1.1(a)(1)(ii)".[2047] Although the United States bases its argument in Article 1, dealing with the existence of a financial contribution, it includes the argument within the "amount" section of its submissions.

7.705 The United States concedes that the tax breaks associated with the IRBs provide a benefit within the meaning of the Article 1.1(b) of the SCM Agreement. However, the United States does not agree that the benefits of the tax breaks received by Spirit pass-through to Boeing.[2048]

Evaluation by the Panel

7.706 As indicated in our analysis of the Washington taxation measures, the Appellate Body established in *US – FSC* that where a general rule of taxation can be identified, it is possible to apply a "but for" test in determining whether revenue that is otherwise due is foregone under Article 1.1(a)(1)(ii) of the SCM Agreement.[2049] Where it is not possible to identify a general rule, the challenged taxation measure should be compared to the fiscal treatment of legitimately comparable income.[2050]

7.707 Although the United States highlights that an amendment to the Kansas taxation legislation renders some property tax-free regardless of the tax abatements arising through the issuance of IRBs, the parties agree that it is only the purchase of commercial and industrial machinery and equipment after 30 June 2006 that is no longer subject to property tax in any event, and since July 2000 has not been subject to sales tax. In its first written submission, the United States seems to have taken a broader view of the 2006 amendment to the Kansas taxation legislation than it later concedes to be the case. In its first written submission, the United States appears to be of the view that from 1 July 2006 no commercial and industrial machinery and equipment will be subject to property tax. Therefore, the United States suggests that the IRBs that have been issued in the past and have been used to purchase such property will no longer give rise to tax abatements and a financial contribution. However, in response to Panel questioning, the United States recognizes that the amendment to the taxation

[2045] United States' response to question 46, para. 122.
[2046] United States' response to question 46, para. 122.
[2047] United States' response to question 253, para. 432 and United States' first written submission, para. 639.
[2048] The summary of the parties' arguments regarding "pass-through", and our analysis of them, is included in the section of this Report quantifying the amount of the Kansas measures for the reasons expressed at para. 7.214 of this Report.
[2049] Appellate Body Report, *US – FSC*, para. 90.
[2050] Appellate Body Report, *US – FSC*, para. 91.

legislation only creates a tax exemption for property *purchased after 30 June 2006* and that property purchased previously will continue to be subject to taxation, but for the IRBs.[2051]

7.708 As the European Communities notes, and as the United States appears to concede, there is a range of property that remains subject to property or to sales tax in the State of Kansas. This includes:

(a) Commercial and industrial machinery and equipment acquired before 2006 (whether or not the 10 year abatement period under the IRB scheme had expired by 2006);[2052]

(b) Property that is not commercial or industrial machinery or equipment;

(c) The improvement, repair or remodeling of commercial and industrial machinery and equipment (because the property tax exemption for commercial or industrial machinery and equipment applies only to the acquisition of such property);

(d) Real property (since 'commercial and industrial machinery and equipment' is defined as 'tangible personal property'); and

(e) Machinery and equipment excluded from the sales tax exemption.[2053]

7.709 Therefore, the "general rule" of taxation in Kansas is that the property listed in the preceding paragraph is subject to property or to sales tax. Given that it is possible to identify a general rule for taxation, then according to the Appellate Body report in *US – FSC,* it is appropriate to apply a "but for" test in determining if the government is foregoing revenue that is "otherwise due" under Article 1.1(a)(1)(ii) of the SCM Agreement. In applying this test, we find that the IRB legislation creates exceptions to the general rule, by granting tax abatements in relation to the property listed in

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[2051] The United States recognizes this in its response to question 46, where its submissions regarding the change in Kansas taxation law go to the incentive that Boeing and Spirit will have to continue to seek IRBs after June 2006.

[2052] Kan. Stat. Ann. 79-223, Exhibit US-244. The amendment to the Kansas taxation law to which the United States refers in its submissions is found in KSA section 79-223. It provides:

> 79-223 (b) The following described property, to the extent specified in this section, shall be and is hereby exempt from all property or *ad valorem* taxes levied under the laws of the state of Kansas:
>
> First. *Commercial and industrial machinery and equipment acquired* by qualified purchase or lease made or entered into *after June 30, 2006*, as the result of a bona fide transaction not consummated for the purpose of avoiding taxation.

[2053] Kan. Stat. Ann. 79-3606(k)(1), Exhibit US-246. See sub-section (5) of KSA 79-3606(kk), which lists property that remains subject to sales tax, following the amendment to the Kansas sales tax legislation in 2000:

> (a) Machinery and equipment used for non-production purposes;
> (b) Machinery, equipment and tools used primarily in maintaining and repairing any type of machinery and equipment or the building and plant;
> (c) Transportation, transmission and distribution equipment not primarily used in production , warehousing or material handling operation at the plant or facility;
> (d) Office machines and equipment;
> (e) Furniture and other furnishings;
> (f) Buildings and any other part of real estate that is not otherwise exempt;
> (g) Building fixtures that are not integral to the manufacturing operation; and
> (h) Machinery and equipment used for general plant heating, cooling and lighting.

the preceding paragraph when IRB funds are used to purchase such property. Therefore, "but for" the relevant Kansas statutory provisions providing for tax breaks through the issuance of IRBs, taxes would otherwise be due on the purchase of such property.

7.710 As indicated at paragraphs 7.155-7.158 of this Report relating to the Washington HB 2294 taxation measures, due to the nature of our serious prejudice analysis, there is no need for the Panel to make a finding regarding whether revenue to be foregone in the period post-2006 constitutes a subsidy.[2054]

7.711 For these reasons, the Panel finds that the IRB scheme results in the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement.

7.712 Given this conclusion, for the reasons expressed in relation to the Washington HB 2294 taxation measures the Panel finds that a benefit exists in relation to the foregoing of revenue otherwise due.[2055] We analyze the parties' arguments regarding "pass-through" in the amount section of this Report, for the reasons expressed at paragraph 7.214.

(v) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

Arguments of the European Communities

7.713 The European Communities argues that the tax benefits associated with the IRBs issued to Boeing and Spirit are de facto specific within the meaning of Article 2.1(c) of the SCM Agreement. This is because of the "predominant use" by Boeing and Spirit of the IRBs, "the granting of disproportionately large amounts of subsidy" to Boeing and Spirit and the discretion exercised in granting the IRBs and associated tax breaks.[2056]

7.714 In relation to its submission that Boeing and Spirit receive a disproportionately large amount of the subsidy, the European Communities submits that Boeing and Spirit have received 61 per cent of all IRBs issued by Wichita through 2005. In addition, Boeing and Spirit have received 69 per cent of IRBs that included property tax abatements.[2057] The European Communities also contends that, assuming much of the Project Property is tangible personal property, Boeing and Spirit have received a disproportionate amount of IRB-related sales tax exemptions granted by the City of Wichita. Finally, in relation to the IRBs issued to companies purely for the purpose of tax breaks, rather than as financing vehicles, the European Communities argues that it is likely that only Boeing and Spirit received such IRBs. In any event, the European Communities requests that the Panel draw an adverse inference that only Boeing and Spirit receive IRBs structured in this manner, due to the United States' non-cooperation in the information-gathering process.[2058]

7.715 In its second written submission, the European Communities compares the statistics quoted in the preceding paragraph with the size of Boeing and Spirit relative to the size of the Wichita economy.[2059] The European Communities assesses this by considering Boeing and Spirit's employment as a percentage of local employment. The European Communities submits that in 2006, Spirit accounted for 3.5 per cent of total employment in the Wichita metropolitan area or 16 per cent of manufacturing employment in the same area. In response to the United States' submission that

[2054] The Panel notes that as there is no Article 3 claim with respect to the tax reductions arising out of the IRBs, the Panel only need quantify the value of the subsidy for the purposes of the serious prejudice analysis.

[2055] See paras. 7.168-7.171 of this Report.

[2056] European Communities' first written submission, para. 334.

[2057] European Communities' first written submission, paras. 336-337.

[2058] European Communities' first written submission, paras. 337, 339.

[2059] European Communities' second written submission, paras. 248-249.

citing Spirit employment levels is misleading because Boeing's employment figures were nearly double those of Spirit during the period in which the IRBs were issued, the European Communities notes that it is prepared to accept this and the resulting figures of 7 per cent and 32 per cent. The European Communities concludes that comparing these figures with the 61 per cent of IRBs that Boeing and Spirit received, "it is clear that Boeing and Spirit have received a disproportionate share of IRB benefits".[2060]

7.716 In making this comparison, it is relevant to note that a Panel question regarding specificity revealed that the parties have different views about the relevant baseline for determining whether "disproportionately large" amounts of subsidy have been granted to certain enterprises.[2061] The parties seem to agree that the disproportionality analysis requires a comparison between two ratios and that the first ratio is the ratio of the total amount of the alleged subsidy granted to Boeing relative to the total amount of the alleged subsidy granted to all participants (i.e. in this case, the ratio indicating that Boeing received 61 per cent of all IRBs issued or 69 per cent of all IRBs issued with tax abatements).[2062] The parties disagree about the second ratio. The European Communities contends that the second ratio should be a ratio of some information about Boeing and Spirit, such as employment levels, relative to comparable information relating to the *entire economy in the jurisdiction of the granting authority* (i.e. in this case the ratio indicating that Boeing made up 7 per cent of employment in all of Wichita). For the United States, the second ratio should compare the information about Boeing and Spirit, such as employment levels, with comparable information about the *group of recipients of the alleged subsidy* (i.e. in this case, the percentage of employment Boeing and Spirit account for out of the enterprises that have received IRBs).[2063]

7.717 The European Communities justifies its choice of baseline by referring to the chapeau to Article 2.1, which provides that the question of whether a subsidy is specific must be considered based on the situation "within the jurisdiction of the granting authority". Therefore, the disproportionality analysis must consider the position of the recipients of the subsidy "within the jurisdiction of the granting authority".[2064] Further, Article 2.1(c) provides that in considering the various factors listed in the sub-paragraph, it is necessary to consider the "diversification of economic activities *within the jurisdiction of the granting authority*". The European Communities interprets "jurisdiction" to mean the geographic territory over which the granting authority can extend or exercise its powers. According to the European Communities, the United States' proposed baseline fails to account for the "extent of diversification of economic activities within the jurisdiction of the granting authority". This is because the United States' proposed baseline is self-contained within the realm of the particular subsidy programme in issue.[2065] The European Communities also notes that the result of applying the United States' baseline in circumstances where only one company receives a particular subsidy would be a finding that the company does not receive a disproportionately large share of the subsidy because it receives 100 per cent of the subsidy and accounts for 100 per cent of employment in the group receiving the subsidy (i.e. it is the only member of the group). This would circumvent the very purpose of Article 2.1(c).[2066]

7.718 In relation to its submission under Article 2.1(c) that the City of Wichita has exercised its discretion in favour of Boeing and Spirit in granting the IRBs and subsequent tax breaks, the European Communities argues that Boeing and Spirit have received specially tailored IRBs. For example, the IRBs issued to Boeing and Spirit have not been used as financing vehicles. Further,

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[2060] European Communities' second written submission, para. 250.
[2061] See European Communities and United States' responses to, and comments on, question 51.
[2062] See United States' comments on European Communities' response to question 51, para. 161.
[2063] United States' comments on European Communities' response to question 51, paras. 161-162.
[2064] European Communities' response to question 51, para. 155.
[2065] European Communities' response to question 51, paras. 156-157 and 161.
[2066] European Communities' response to question 51, paras. 165-169.

Boeing and Spirit have, since 1999, received the full 10 year property tax abatement without the five year review and re-authorization which other companies require.[2067] Finally, there is a certain amount of discretion in issuing the IRBs in the first place. For instance, in 1999 a health club was denied its application.[2068]

7.719 In its first written submission, the European Communities states that no other companies, apart from Boeing and Spirit, have received letters of intent for IRBs for values anywhere near $1 billion or $2 billion.[2069] The European Communities does not make it clear whether this is relevant to its argument about "predominant use" or disproportionality. However, in its second written submission, the European Communities clarifies this. It responds to the United States' submission that another company, Cessna, has received IRBs totalling approximately $1 billion since 1991. The European Communities argues this supports a finding of specificity because Boeing, Spirit and Cessna have received approximately 78 per cent of IRBs issued through 2005. This constitutes use by a limited number of certain enterprises, predominant use by certain enterprises and a disproportionate grant of subsidies to certain enterprises.[2070]

Arguments of the United States

7.720 The United States' primary argument in relation to the tax breaks provided following the issuances of IRBs is that the alleged subsidy is not specific. This is clear from the United States' response to a Panel question in relation to the financial contribution analysis.[2071] The United States briefly addresses the financial contribution question in a single paragraph before stating:

> "More fundamentally, as the United States explained in previous submissions, the EC has failed to establish that the IRB benefits are specific."[2072]

The United States then uses the rest of its response to the question to discuss specificity.

7.721 The United States notes that the alleged subsidies arising as a result of the IRBs are not *de jure* specific and notes that the European Communities concedes this by not arguing *de jure* specificity under Article 2.1(a).[2073] The United States argues that the Kansas law authorizing cities to issue IRBs does not restrict the identity of bondholders. Rather, the relevant statute provides that "any person, firm or corporation" across a broad range of sectors may have IRBs issued on their behalf. This is consistent with the law's purpose, which is to promote the welfare of Kansas citizens by attracting business activities to the State.[2074]

7.722 The United States also argues that the alleged subsidies are not de facto specific under Article 2.1(c) of the SCM Agreement. The United States notes that the City of Wichita has issued hundreds of IRBs and that the relevant IRB legislation is not designed or applied specifically to assist Boeing.[2075]

[2067] European Communities' first written submission, para. 339 and European Communities' second written submission, para. 252.
[2068] European Communities' second written submission, para. 250 and European Communities' first written submission, para. 339, footnote 542.
[2069] European Communities' first written submission, para. 338.
[2070] European Communities' second written submission, para. 251.
[2071] United States' response to question 46.
[2072] United States' response to question 46, para. 123.
[2073] United States' first written submission, para. 602.
[2074] United States' first written submission, paras. 599-602.
[2075] United States' first written submission, paras. 603 and 611.

7.723 In relation to the European Communities' contention that the subsidy was predominantly used by Boeing and Spirit, the United States notes that in considering this factor, "account shall be taken of the extent of economic diversification in the jurisdiction of the granting authority". According to the United States, the European Communities has ignored this requirement.[2076]

7.724 The United States rejects the proposition that Boeing and Spirit receive a disproportionate percentage of IRBs issued by the City of Wichita. Comparing the proportion of the economy employed by Spirit with the proportion of IRBs received by Spirit and Boeing is not "the fact-intensive inquiry required to determine whether the factors listed in Article 2.1(c) support a finding of specificity".[2077] Examining one metric in isolation "does not establish that there was a granting of disproportionately large amounts of subsidy to certain enterprises within the meaning of Article 2.1(c)".[2078] In addition, the single metric that the European Communities relies upon is misleading because the European Communities cites Spirit's, rather than Boeing's, employment level. Boeing's employment level was more than double that of Spirit during the period of time during which many of the IRBs were issued.[2079]

7.725 The United States argues that, of the *group of companies eligible for IRB issuances* in the City of Wichita, the share of IRBs Boeing received is not disproportionate. The fact that Boeing received a large share of the IRBs is unremarkable because the Boeing Wichita facility was the largest private sector employer for the entire State of Kansas prior to its sale to Spirit.[2080] Although the United States does not provide a statistic for the proportionality analysis when conducted using the baseline it considers appropriate, namely the group of companies that received Wichita IRBs, this may be explained by the United States' argument elsewhere that "it is not the burden of the United States to demonstrate that IRBs are de facto non-specific".[2081] A further point that the United States makes in relation to the proportionality analysis is that many companies, apart from Boeing and Spirit, have received IRBs with large face values. For example, Cessna Aircraft Company has received $1 billion in IRB issuances.[2082]

7.726 In defending its choice of baseline for the proportionality analysis, the United States argues that its approach leads to an "apples-to-apples" comparison, whereas the European Communities' approach leads to an "apples-to-oranges" comparison. This is because, in the two ratios to be compared, under the United States' approach, the same group serves as the denominator in both ratios (i.e. the group comprised of all recipients of the alleged subsidy). However, under the European Communities' approach, two different groups serve as the denominators (one consists of all recipients of the subsidy and the other consists of the entire population of the relevant geographic jurisdiction of the granting authority).[2083]

7.727 The United States also contests the European Communities' argument that use of a baseline consisting of the geographical jurisdiction of the granting authority is grounded in the text of Article 2.1. The chapeau of Article 2.1 refers to specificity "within the jurisdiction of the granting authority", but this serves to delimit the enterprises that are potentially subject to the specificity inquiry but does not suggest that the specificity enquiry must necessarily be based on *all* enterprises within the jurisdiction.[2084] Further, in providing that account shall be taken of the "extent of

[2076] United States' first written submission, paras. 606-607.
[2077] United States' response to question 46, para. 124.
[2078] United States' response to question 46, para. 124.
[2079] United States' response to question 46, para. 125.
[2080] United States' first written submission, para. 613.
[2081] See United States' comments on European Communities' response to question 51, para. 161 and United States' second written submission, para. 146.
[2082] United States' first written submission, para. 612.
[2083] United States' comments on European Communities' response to question 51, paras. 161-162.
[2084] United States' comments on European Communities' response to question 51, para.163.

diversification of economic activities within the jurisdiction of the granting authority", Article 2.1(c) establishes an additional consideration, rather than conditioning the proportionality analysis.[2085] In response to the European Communities' argument that the United States' approach fails when a subsidy is granted only to one company, the United States argues that in such a case, the "predominant use" enquiry is the relevant factor to consider, rather than a disproportionality analysis.[2086]

7.728 The United States rejects the European Communities' argument that the City of Wichita has improperly exercised its discretion in favour of Boeing and Spirit. The United States asserts that ownership of the IRBs by the entity on whose behalf they were issued is not unusual, as many other companies have had IRBs structured in this manner.[2087] Further, the structure is the decision of the entity and not the government, which only approves the bond issuance. Therefore, the structure Boeing and Spirit choose to use is irrelevant because the SCM Agreement only disciplines government action. Finally, the fact that Boeing uses the IRBs to gain only the benefit of the tax abatements and not as a financing vehicle as well "hardly shows that the subsidy was specific to Boeing".[2088]

7.729 With respect to the European Communities' argument that discretion has been exercised in favour of Boeing and Spirit because Boeing has received ten year tax abatements without a review at the five year mark, the United States notes that it is not aware of any case in which an extension has been refused for entities that have faced a five year review.[2089] In addition, although there is now a policy providing for five year tax abatement periods relating to personal (as opposed to real) property, Boeing's IRBs were issued prior to implementation of this policy and "a ten year abatement on personal property tax was far from unique".[2090] Finally, the fact that the Wichita City Council disapproved an application to issue IRBs on behalf of a health club does not indicate that there was an improper exercise of discretion that demonstrates specificity. In considering the exercise of discretion under Article 2.1(c), footnote 3 provides that the frequency with which such applications are refused or approved and the reasons for such decisions *shall* be considered. The United States notes that the purpose of issuing IRBs is to attract new investment to the area to increase employment. The City does not use the IRBs to attract businesses that must be located within the area in any event, in order to take advantage of the local consumer market. It was on this basis that the health club application was rejected. This was consistent with the City's IRB policy and it does not demonstrate that the IRBs are specific.[2091]

7.730 According to the United States, the European Communities ignores the requirement in Article 2.1(c) that account "shall be taken of the extent of diversification of economic activities within the jurisdiction of a granting authority".[2092] The SCM Agreement recognizes that a subsidy may be widely distributed and yet appear specific, due to limited diversification in the relevant economy. The United States argues that this is the case with the IRBs distributed in Wichita because the core industry in Wichita is aircraft production.[2093]

[2085] United States' comments on European Communities' response to question 51, para. 165.
[2086] United States' comments on European Communities' response to question 51, para. 167.
[2087] United States' first written submission, para. 616.
[2088] United States' first written submission, para. 617.
[2089] United States' first written submission, para. 621.
[2090] United States' first written submission, para. 622.
[2091] United States' first written submission, para. 624.
[2092] United States' first written submission, para. 607.
[2093] United States' first written submission, para. 607.

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Arguments of third parties

Australia

7.731 In determining whether a subsidy has been granted in disproportionately large amounts in the context of the de facto specificity analysis, Australia contends that the appropriate baseline group against which to compare the proportion of the subsidy granted to certain enterprises is "the wider group of entities in the territorial jurisdiction which potentially are able to use or have access to the subsidy programme".[2094] Australia notes that this may be a wider group than that which actually received the subsidy.[2095] According to Australia, to use the group of entities that actually received the alleged subsidy as the baseline group, as advocated by the United States, would create a meaningless point of comparison.[2096] Australia explains that under the United States' test, "the subsidy recipients would always represent the total potential subsidy recipients".[2097]

Brazil

7.732 Brazil submits that the appropriate baseline against which to compare the proportion of subsidy received by certain enterprises in the context of determining if the subsidy has been granted in disproportionately large amounts is the wider group of entities in the territorial jurisdiction of the granting authority.[2098] Brazil argues that the text of Article 2.1(c) of the SCM Agreement provides support for the use of this baseline because it provides that "{i}n applying this subparagraph, account shall be taken of the extent of diversification of economic activities within the jurisdiction of the granting authority".[2099] Brazil also notes that although Article 2.1(c) does not define the expression "disproportionately large amounts", its understanding is that to the extent the share of a subsidy granted to a company corresponds to such company's share of total manufacturing production, the company does not receive the subsidy in "disproportionately large amounts".[2100]

7.733 Brazil contends that the approach advocated by the United States, namely using the group of entities that received the subsidy as the baseline group for the purposes of the disproportionality analysis, "is contrary to the concept of specificity itself".[2101] In Brazil's view, specificity exists where a subsidy is targeted at a particular group of users. Under the United States' approach, if a certain industry were granted 100 per cent of the subsidy, the industry would be found to have received the subsidy in a proportion commensurate with its share in manufacturing production because the industry would represent 100 per cent of baseline production.[2102]

Canada

7.734 Canada notes that the SCM Agreement does not provide any express guidance regarding the appropriate benchmark to use in determining whether certain enterprises have been granted a disproportionate amount of subsidy. According to Canada, no single benchmark is appropriate for every fact pattern that may arise. Further, any benchmark that is chosen must allow for a thorough and objective consideration of the specific facts of the dispute.[2103]

[2094] Australia's response to question 11.
[2095] Australia's response to question 11.
[2096] Australia's response to question 11.
[2097] Australia's response to question 11.
[2098] Brazil's response to question 11, para. 13.
[2099] Brazil's response to question 11, para. 14.
[2100] Brazil's response to question 11, para. 12.
[2101] Brazil's response to question 11, para. 11.
[2102] Brazil's response to question 11, para. 13.
[2103] Canada's response to question 11, para. 12.

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7.735 In Canada's view, any disproportionality analysis must be based on relevant and objective benchmarks, such as sales, capital invested or share of GNP. The appropriate benchmark to employ requires an assessment of the totality of the facts in a given case and depends upon the nature of the subsidy. For instance, if the subsidy in issue assists in the area of employment training, the relevant benchmark may be the number of employees found in each industrial sector.[2104]

7.736 Canada also contends that some discretion must be exercised in determining whether a disproportionately large amount of subsidy has been granted to certain enterprises. According to Canada, disproportionality requires "a significant deviation from the results expected as a result of the comparison to an objective benchmark".[2105] Further, the deviation should be assessed in the light of any explanation for it offered by the Member in question.[2106]

7.737 Canada argues that the European Communities' choice of baseline for the purposes of the disproportionality analysis is problematic. This is because if, for example, a subsidy were available to the manufacturing and the services sectors, which would be a widely available programme, a finding of disproportionality would be inevitable if the funding proportions were assessed against the wider group of enterprises in the territorial jurisdiction of the granting authority. This would be the case even if each enterprise received the subsidy in proportion to its weight within the manufacturing and services sectors. Canada submits that this would not advance the objectives of Article 2 of the SCM Agreement.[2107]

7.738 Canada also contends that the United States' choice of baseline for the purposes of the disproportionality analysis is overly formalistic. According to Canada, the United States' position is that the disproportionality analysis requires an examination of the proportion of subsidy received by each enterprise "in order to ascertain whether each enterprise received approximately the same share".[2108]

China

7.739 China submits that the de facto specificity analysis under Article 2.1(c) of the SCM Agreement requires a three-prong analysis.[2109] First, there should be "reasons to believe" that the subsidy in issue may in fact be specific. This requires the Panel to ascertain whether the complaining party has presented plausible reasons to challenge the subsidy programme as de facto specific.[2110] China submits that the standard to satisfy this first prong is not particularly high.[2111]

7.740 The second step of the analysis requires a consideration of any or all of the four factors identified in the second sentence of Article 2.1(c). This is at the "centre of testing whether the subsidy is specific in fact".[2112] China submits that any of the four factors may point to a finding of de facto specificity and that it is not necessary that all four factors be present simultaneously.[2113]

7.741 Finally, China argues that account shall be taken of the two "circumstantial factors" listed in the final sentence of Article 2.1(c), namely the extent of diversification of economic activities within the jurisdiction of the granting authority and the length of time during which the subsidy programme

[2104] Canada's response to question 11, para. 18.
[2105] Canada's response to question 11, para. 19.
[2106] Canada's response to question 11, para. 19.
[2107] Canada's response to question 11, para. 14.
[2108] Canada's response to question 11, para. 15.
[2109] China's written submission, paras. 27-33 and China's response to question 12.
[2110] China's response to question 12, para. 7.
[2111] China's written submission, para. 29.
[2112] China's response to question 12, para. 8.
[2113] China's response to question 12, para. 8.

has been in operation.[2114] The purpose of the final step is to verify that a subsidy is indeed de facto specific in circumstances where this appears to be the case following the second prong of the analysis.[2115]

Japan

7.742 Japan submits that the baseline against which to compare the proportion of the subsidy received by certain enterprises in the disproportionately analysis should include "all of the enterprises that received the similar subsidies from the granting authority".[2116] Japan argues that the use of all entities within the territorial jurisdiction of the granting authority is not an appropriate baseline.[2117]

Evaluation by the Panel

7.743 The European Communities does not attempt to argue that the tax abatements provided through the issuance of IRBs are *de jure* specific under Article 2.1(a) and it is clear that this is not the case. The relevant Kansas statutory provisions do not expressly limit the availability of the subsidy such that it is not broadly available throughout the economy. This is in accordance with the legislation's broad purpose, which does not include any suggestion of an intent to limit the issuance of IRBs to "certain enterprises" within the meaning of Article 2.1(a):[2118]

> "It is the purpose of this act to promote, stimulate and develop the general welfare and economic prosperity of the state of Kansas through the promotion and advancement of physical and mental health, industrial, commercial and agricultural, natural resources and of recreational development in the state; to encourage and assist in the location of new business and industry in this state and the expansion, relocation or retention of existing business, industry and health development; and to promote the economic stability of the state by providing greater employment opportunities, diversification of industry and improved physical and mental health, thus promoting the general welfare of the citizens of this state by authorizing all cities and counties of the state to issue revenue bonds."

7.744 The European Communities restricts its specificity submissions to Article 2.1(c) of the SCM Agreement. Under Article 2.1(c), a subsidy that appears non-specific under Article 2.1(a) and (b), may nevertheless be found to be *in fact* specific due to the way the subsidy programme actually operates. Article 2.1(c) provides:

> "If, notwithstanding any appearance of non-specificity resulting from the application of the principles laid down in subparagraphs (a) and (b), there are reasons to believe that the subsidy may in fact be specific, other factors may be considered. Such factors are: use of a subsidy programme by a limited number of certain enterprises, predominant use by certain enterprises, the granting of disproportionately large amounts of subsidy to certain enterprises, and the manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy. In applying this subparagraph, account shall be taken of the extent of diversification of economic activities within the jurisdiction of the granting authority, as well as of the length of time during which the subsidy programme has been in operation."

[2114] China's written submission, para. 31.
[2115] China's response to question 12, para. 9.
[2116] Japan's response to question 11.
[2117] Japan's response to question 11.
[2118] Kan. Stat. Ann. § 12-1740 *et seq.* (2001), Exhibit EC-167.

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7.745 The European Communities' main contention is that the City of Wichita IRBs are granted in disproportionately large amounts to Boeing and Spirit, are predominantly used by Boeing and Spirit and that the granting authority exercised its discretion in favour of Boeing and Spirit. At one point in its submissions, the European Communities also argues that the subsidy programme is used by a limited number of certain enterprises.

Predominant Use

7.746 The first two specificity factors found in the text of Article 2.1(c) are "use of a subsidy programme by a limited number of certain enterprises" and "predominant use by certain enterprises". The ordinary meaning of the term "predominant" includes "constituting the main or strongest element; prevailing" and "most frequent or common".[2119] Further, reading the second factor in the context of the first indicates that "predominant use" refers to predominant use of a subsidy programme. Therefore, the second factor listed in Article 2.1(c) requires consideration of whether the subsidy programme in issue is mainly or most frequently used by "certain enterprises".

7.747 The final sentence of the text of Article 2.1(c) requires that "in applying this subparagraph, account shall be taken of the extent of diversification of economic activities within the jurisdiction of the granting authority, as well as of the length of time during which the subsidy programme has been in operation". Therefore, the assessment of whether "certain enterprises" are the predominant users of the subsidy programme is informed by these two considerations. For example, if certain enterprises have been the main or most frequent recipients of a subsidy, whether this constitutes "predominant use" of the programme will be affected by whether or not the economy in the jurisdiction of the granting authority is highly diversified or whether it is made up of only a small number of industries, with the "certain enterprises" in question playing a significant role. Further, the length of time in which a subsidy programme has been in operation colours the analysis because if, for example, the subsidy programme is relatively new, the fact that "certain enterprises" have been the main or most frequent beneficiaries under the programme may be a reflection of the fact that the programme has not been in operation long enough to have a wide range of users, rather than an indication that the programme is de facto specific.

7.748 In contending that the subsidy has been predominantly used by certain enterprises, the European Communities relies on the fact that Boeing, Spirit and Cessna Aircraft Company are the only enterprises to receive LOIs for IRBs in amounts as high as $1-$2 billion. According to the European Communities, the three companies received 78 per cent of the IRBs issued in the City of Wichita over the period 1979-2005. Further, the European Communities submits that Boeing and Spirit received 61 per cent of all IRBs issued by the City of Wichita, 69 per cent of all IRBs that included property tax abatements[2120] and close to 100 per cent of bonds that provided only for property tax abatements and were not used as financing mechanisms (because the bonds were bought by Boeing and Spirit themselves).

7.749 In its description of the IRB scheme, the European Communities identifies three "economic incentives" that can arise under it, namely, the ability to borrow funds at lower than market interest rates, property tax abatements and sales tax exemptions.[2121] In its submissions regarding "predominant use", the European Communities presents statistics relating to three different scenarios. First, the percentage of IRBs received by Boeing and Spirit in the group of companies that receive any type of IRB, whether only giving rise to tax abatements, only to borrowed funds or to both (61 per

[2119] *Shorter Oxford English Dictionary*, L. Brown (ed.) (Clarendon Press, 1993), Vol. II, p. 2321 and *Webster's Online Dictionary*, respectively.

[2120] Some of the IRBs issued by the City of Wichita were financing vehicles only and did not provide for property tax abatements on property purchased with IRB funds.

[2121] European Communities' first written submission, para. 298.

cent); secondly, the percentage of IRBs received by Boeing and Spirit in the group of companies that receive IRBs that include property tax abatements (69 per cent); and finally, the percentage of IRBs received by Boeing and Spirit in the group of companies that receive IRBs that include only property tax abatements (approximately 100 per cent, although this figure is refuted by the United States).

7.750 In analyzing the "predominant use" factor under Article 2.1(c) of the SCM Agreement, and determining which of the statistics presented by the European Communities is the appropriate one to consider, we recall that "predominant use" refers to predominant use of a *subsidy programme*. Therefore, the relevant statistic is the relative use by Boeing and Spirit of the subsidy programme in issue. The European Communities does not make any submissions to suggest that the City of Wichita operates separate IRB programmes depending upon whether or not tax abatements, or financing, or both, are provided under the IRBs. The State of Kansas legislation and the City of Wichita Economic Development Incentive Policy, under which the IRBs are issued, set out single policy objectives and procedures for the issuance of IRBs, regardless of the terms under which the IRBs are issued.[2122] The City of Wichita Economic Development Incentive Policy also establishes the conditions under which an IRB issuance will include tax abatements.[2123] Further, as the United States highlights, the decision regarding whether a company will purchase its own bonds and therefore not borrow funds as a part of its IRB programme is made by the company itself, rather than the City of Wichita. These factors indicate that there is a single IRB programme. In our view, there is not a separate programme relating to IRBs that provide only tax abatements, as this is a consequence of the decision of a private company to purchase its own bonds, rather than the actions of a government body implementing a different IRB programme. Further, the issuance of IRBs with and without tax abatements occurs under the same City of Wichita policy and is dependent upon whether or not certain conditions are met, as set out in the single policy. This is also indicative of a single IRB programme, albeit with different consequences depending upon what conditions the applicant meets.

7.751 Having reached the conclusion that there is a single IRB programme, in our view it would not be appropriate to include IRBs that give rise only to the borrowing of funds, and not to tax abatements, within the analysis and calculations regarding predominant use of a *subsidy* programme. Whether or not the lending of funds by the City of Wichita under IRBs is a subsidy is not in issue in this dispute. Therefore, to find that a company is *using* a *subsidy* programme when it receives IRBs that only provide for the borrowing of funds, when it is not clear that such IRBs in fact confer a subsidy, would be problematic. Therefore, we find that although there is a single IRB programme, for the purposes of this dispute, the relevant *users* of the *subsidy* programme are those companies that receive IRBs that include tax abatements and may or may not include the borrowing of funds. Under this approach, the relevant statistic is that Boeing and Spirit receive 69 per cent of the relevant IRBs (and Boeing, Spirit and Cessna together receive more than 78 per cent of the relevant IRBs).[2124]

7.752 In determining whether there has been "predominant use" of the subsidy programme by certain enterprises, we are required to consider the extent of diversification of economic activities within the jurisdiction of the granting authority, as well as the length of time during which the subsidy programme has been in operation. While the statistics provided by the European Communities suggest that Boeing, Spirit and Cessna are indeed significant users of the tax breaks, any form of

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[2122] City of Wichita/Sedgwick County Economic Development Incentives Policy, Exhibit EC-190.

[2123] City of Wichita/Sedgwick County Economic Development Incentives Policy, Exhibit EC-190, pp. 3-4.

[2124] "More than" 78 per cent because the statistic represents the proportion of IRBs received by the Boeing, Spirit and Cessna, relative to the total value of all IRBs issued, i.e. those IRBs that provide only for the borrowing of funds are not excluded. If such IRBs were excluded from the calculation, the statistic would increase because the numerator would stay the same (the value of IRBs issued to Boeing, Spirit and Cessna) but the denominator would decrease (the total value of all IRBs issued but excluding those that provide only for the borrowing of funds).

judgment regarding whether they are the "main" or "most frequent" users must be conditioned by consideration of the extent of diversification in the economy of the granting authority, namely the Wichita economy.[2125] The only information provided by the European Communities regarding the diversification of the Wichita economy is submitted in support of its analysis regarding whether Boeing and Spirit have been "granted disproportionately large amounts of the subsidy". In this regard, the European Communities argues that Boeing and Spirit account for 14 per cent of total employment in Wichita or 32 per cent of employment in the manufacturing sector. In contrast, the United States submits that the "core industry of Wichita has focused on aircraft production"[2126] and that Wichita is sometimes known as the "Air Capital of the World", indicating that it does not have a diversified economy.[2127] This comparison, between the proportion of subsidy received by Boeing and Spirit and the proportion of the economy employed by Boeing and Spirit, is analyzed in the subsection following, which assesses whether Boeing and Spirit have been granted a "disproportionately large" amount of subsidy. Given our conclusion in the following subsection, that this comparison supports a finding of de facto specificity, it is not necessary for us to duplicate the comparison in the context of the "predominant use" analysis.

Disproportionately large amount

7.753 In considering the arguments of the parties regarding whether the City of Wichita granted the tax abatements to "certain enterprises" in disproportionately large amounts, two issues arise. The first is the correct interpretation of "disproportionality", including what ratios need to be compared in this analysis. Once we have interpreted the term, we must determine whether the European Communities has adequately substantiated its argument that the City of Wichita granted Boeing and Spirit IRB tax abatements in a disproportionate amount.

7.754 The ordinary meaning of "disproportionate" is "lacking proportion", where "proportion" means "a portion, a part, a share, esp. in relation to a whole", " a relative amount or number", "a comparative relation or ratio between things in size, quantity, number etc."[2128] Therefore, in assessing whether a subsidy to certain enterprises is "disproportionately large", it will be necessary to convert the amount of the subsidy into a ratio by comparing it to something else that is "whole". This ratio then needs to be assessed to determine whether it is lacking proportion.

The proportion of the subsidy received by Boeing and Spirit

7.755 The parties agree on the way in which the ratio or the proportion of subsidy granted to Boeing and Spirit should be calculated. Both parties submit that the relevant ratio is the total amount of the alleged subsidy granted to Boeing and Spirit, relative to the total amount of the alleged subsidy granted to all participants in the City of Wichita IRB programme. We agree with the submissions of the parties that when a subsidy has been granted under a subsidy programme, that programme should ordinarily serve as the "whole" against which the subsidies to "certain enterprises" can be compared. This approach finds support in the text of the final sentence of Article 2.1(c), which provides that when applying the subparagraph, it is necessary to take into account the length of time during which *the subsidy programme* has been in operation. If this needs to be considered when performing the

[2125] In the case of the IRBs provided to Boeing and Spirit, although the State of Kansas implemented the legislation authorizing the issuance of IRBs, individual cities and counties are responsible for actually granting the IRBs. Therefore, the City of Wichita is the relevant granting authority and the diversification of the Wichita economy must be considered.

[2126] United States' first written submission, para. 607.

[2127] Greater Wichita Convention & Visitors Bureau, Aviation and Wichita, Exhibit US-250.

[2128] *Shorter Oxford English Dictionary,* L. Brown (ed.) (Clarendon Press, 1993), Vols. I and II, pp. 708 and 2370. This is confirmed by *Webster's New Encyclopedic Dictionary,* (Könemann, 1993), pp. 291 and 811, which gives the definition of "disproportion" as "lack of proportion", where "proportion" means "the relation of one part to another or to the whole".

disproportionality analysis, this implies that the relevant baseline for the ratio is the amount granted under that subsidy programme.

7.756 The European Communities submits that Boeing and Spirit received 69 per cent of all IRBs granted by the City of Wichita.[2129] The United States does not object to this ratio. However, we note that the European Communities has calculated this ratio using the values of the IRBs issued, rather than the value of the tax abatements granted, which is the relevant subsidy. To the extent that other IRB recipients received tax abatements of the same percentage value under the terms of their IRB issuances as Boeing and Spirit, namely 100 per cent tax abatements, the value of the IRBs issued is a good proxy for the amount of the subsidy. This is because the value of the IRBs represents the value of the property that may be purchased and consequently subject to the tax abatement. To the extent that all tax abatements under the IRBs are of the same percentage value, the value of the property purchased will be in proportion to the value of the tax abatement. However, we note that under the terms of the City of Wichita Economic Development Incentive Policy, the City of Wichita has the option of granting less than 100 per cent tax abatements under the IRBs.[2130] Further, the list of IRBs issued by the City of Wichita, provided by the European Communities in an exhibit, indicates that while the majority of IRBs issued with tax abatements included 100 per cent tax abatements, a small percentage were granted less than 100 per cent tax abatements.[2131] This indicates that the value of the IRBs is not a perfect proxy for the amount of the subsidy granted. However, taking account of the fact that not all companies received 100 per cent tax abatements, the effect would be to increase the value of the statistic above 69 per cent.[2132] Therefore, in our view it is reasonable to rely on the ratio calculated by the European Communities in the disproportionality analysis.

7.757 In calculating the proportion of the subsidy received by Boeing and Spirit, the European Communities bases its calculation on the IRBs issued between 1979, when the City of Wichita began keeping records of the issuances, and 2005. The United States does not raise any objections to this. We recall that the final sentence of Article 2.1(c) requires that account be taken of the length of time during which the subsidy programme has been in operation and we consider that the disproportionality analysis is one stage at which the length of the subsidy programme should be considered. It is not the case that the IRB programme has been in operation for only a short period of time and therefore that it is too early to draw conclusions regarding specificity. However, it is arguable that when a subsidy programme has been in operation for a long period of time, such as the IRB programme, aggregating the data over the entire life of the subsidy may not always be appropriate. This may be the case where there has been a significant change in the structure of the economy and the importance of the subsidized activities in the economy over the life of the subsidy. However, there is no evidence before the Panel to suggest that this has been the case in Wichita. Therefore, in the absence of such evidence, we rely on the method used by the European Communities to calculate the proportion of the subsidy received by Boeing under the IRB subsidy programme.

7.758 Finally, in calculating the proportion of the subsidy received by Boeing and Spirit, the European Communities uses the value of IRBs issued to all enterprises as the denominator. An examination of the list of enterprises that have been issued IRBs reveals that some of them were

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[2129] Where we rely on the reasoning in the "predominant use" section of this Report regarding the relevant "subsidy" programme.

[2130] City of Wichita/Sedgwick County Economic Development Incentives Policy, Exhibit EC-190, pp. 3-4.

[2131] List of IRBs Maintained by the City of Wichita, 1979-2005, obtained via Kansas Open Records Act request to the City of Wichita, Exhibit EC-170.

[2132] If the lower level of tax abatements to some companies were accounted for in the statistic, the numerator of the equation (the subsidy to Boeing) would not change, but the denominator (the total amount of subsidies granted) would become smaller, creating a larger ratio.

issued to entities within the services sector.[2133] Given that the SCM Agreement disciplines only the goods sector, the de facto specificity analysis is concerned with determining whether a subsidy is specific within this sector. However, if the European Communities had excluded the IRBs issued to entities within the services sector, the proportion of the subsidy issued to Boeing and Spirit would in fact have been higher than 69 per cent.[2134] Therefore, in our view it is still legitimate to rely on a value of at least 69 per cent as the proportion of the subsidy issued to the goods sector received by Boeing and Spirit.

Is the proportion of the subsidy received by Boeing and Spirit disproportionately large?

7.759 We accept that Boeing and Spirit received approximately 69 per cent of the subsidy granted by the City of Wichita to the goods sector. In determining whether this is a "disproportionately large" amount, we note that there is no explicit guidance in the text of Article 2.1(c) regarding what the relative amount of subsidy received by Boeing and Spirit should be compared against. This is where the disagreement between the parties arises. The European Communities contends that the second ratio should be a ratio of some information about Boeing, such as employment levels, relative to comparable information relating to the *entire economy in the jurisdiction of the granting authority.* In comparison, the United States argues that the second ratio should compare the information about Boeing, such as employment levels, with comparable information about the *group of recipients of the alleged subsidy*.

7.760 In our view, the ratios advocated by the parties are both problematic. While there is some textual support for the European Communities' approach, it has implications that are not consistent with the way in which Article 2 has been interpreted in previous panel reports. The textual support for the European Communities' approach arises from the final sentence of Article 2.1(c), which requires that "the extent of diversification of economic activities within the jurisdiction of the granting authority" be taken into account in applying the subparagraph. In determining whether the amount of subsidies granted to "certain enterprises" is lacking proportion, comparing the percentage of the subsidy received by the "certain enterprises" with their position within the entire economy, is one way in which the diversification of the economy in the jurisdiction of the granting authority can be taken into account. Although not addressed by the European Communities in its submissions, in the context of the SCM Agreement we consider the reference to entire or overall economy to be a reference to that part of the economy represented by the goods sector, given that the SCM Agreement disciplines only subsidies provided within this sector. The European Communities' reliance upon Boeing's employment levels within the manufacturing sector indicates that the European Communities implicitly accepts this.

7.761 However, while there is some textual support for the European Communities' approach, there are a number of problems with it. The first arises when reading Article 2.1(c) in the context of Article 2.1(b). The European Communities' approach *always* allows a finding of disproportionality to be made in circumstances where eligibility for a subsidy is restricted according to objective criteria or conditions under Article 2.1(b) (where we interpret disproportionality as any discrepancy, however small, between the two ratios). However, Article 2.1(b) provides that a subsidy shall *not* be found to

[2133] List of IRBs Maintained by the City of Wichita, 1979-2005, obtained via Kansas Open Records Act request to the City of Wichita, Exhibit EC-170, which indicates that IRBs have been issued to entities such as "Riverside Hospital", "St Francis Medical Center" and "Historic Hotel Partners", which appear to be within the services sector.

[2134] This is because exclusion of the subsidies to the services sector would have left the numerator unchanged (the value of the subsidy to Boeing and Spirit) and would have decreased the denominator (because it would become the amount of the IRBs issued only to the goods sector, rather than the goods and services sectors combined). This would have the effect of increasing the ratio.

be specific by reason of such objective criteria or conditions. To illustrate why Article 2.1(b) would be deprived of all meaning under the European Communities' interpretation, we consider a hypothetical situation where all enterprises with more than 1000 employees are eligible for a subsidy and this criteria falls within Article 2.1(b). In this circumstance, the recipients of the subsidy will represent 100 per cent of the amount of the subsidy granted, but less than 100 per cent of the overall economy. Taking a very simple example for illustrative purposes, consider there are three companies with over 1000 employees and they receive 50 per cent, 40 per cent and 10 per cent of the amount of the subsidy granted. Using the European Communities' approach, these ratios are compared with the position of the companies in the overall economy, for example by comparing them to the percentage of employment they each contribute to the total economy. Unless the other companies in the wider economy that did not receive the subsidy account for 0 per cent of employment, the contribution to employment of the three companies in question *cannot* be 50 per cent, 40 per cent and 10 per cent. Rather, at least one of the percentages must be smaller, making it possible to find that at least one of the enterprises has been granted a subsidy that lacks proportion to its position within the economy.

7.762 In fact, the same issue arises in relation to *any* limit on the availability of a subsidy. In circumstances where a subsidy may be broadly available throughout an economy, with 90 per cent of enterprises receiving it, a comparison of the ratio of the amount of subsidy received by each enterprise, or set of "certain enterprises", with their contribution to the wider economy (including the 10 per cent of enterprises that did not receive the subsidy) will necessarily result in at least one enterprise or set of "certain enterprises" receiving an amount of subsidy in disproportion to its contribution to the economy. This contradicts the approach that has been taken to the purpose of a specificity analysis by prior panels, such as the panel in *US – Upland Cotton,* which held that there is a tipping point, which is not subject to rigid quantitative definition, at which a subsidy becomes "sufficiently broadly available" throughout an economy as to become non-specific. The panel indicated that something less than universal availability can lead to a finding of non-specificity.

7.763 On the face of Article 2 of the SCM Agreement, which does not expressly suggest that there must be some level of strictness associated with the limit on access to the subsidy for it to be specific, it may have been possible to interpret a subsidy as specific whenever there were *any* limit on its availability. Indeed, if the purpose of Article 2 is as the panel suggested in *US – Softwood Lumber IV,* namely to prevent trade distortion, it would seem that *any* express or de facto limit on the availability of a subsidy, such that it is not *universally* available, would create a distortion. This is because resources would be diverted from those enterprises not benefiting from the subsidy to those that are so benefiting. If such an approach had been taken to Article 2, the European Communities' approach to the disproportionality analysis would have been appropriate (apart from in relation to Article 2.1(b)) because it leads to a finding of disproportionality, and therefore a potential finding of de facto specificity, in response to *any* limit on the availability of a subsidy such that 100 per cent of enterprises do not benefit from it. However, this is not the way in which Article 2 has been interpreted in prior disputes. The upshot is that the European Communities' approach leads to a finding that a subsidy has been granted in disproportionately large amounts by reason of the existence of a restriction on its availability but where otherwise the subsidy would be considered to be broadly available throughout the economy and therefore non-specific.

7.764 The United States' approach to the disproportionality analysis is also problematic. According to the United States, the second ratio in the disproportionality analysis should compare information about Boeing and Spirit, such as employment levels or output, with comparable information about the *group of recipients* of the alleged subsidy. While it is difficult to find support for the United States' view from the text or context of Article 2 of the SCM Agreement, from a mathematical point of view, the United States' approach is more logical than that of the European Communities. As the United States highlights, in comparing the ratio of the amount of subsidy that Boeing and Spirit receive in relation to the entire group of recipients of the subsidy with the ratio of Boeing and Spirit's employment levels in relation to the aggregated employments levels of the group of recipients of the

subsidy, like is compared with like, as both ratios have the same denominator. The effect is that, unlike under the European Communities' approach, it is always at least possible to find that a subsidy has not been granted to "certain enterprises" in a disproportionate amount in circumstances where there is some limit on the subsidy's availability.

7.765 However, it is difficult to reconcile the United States' approach with the purpose of Article 2 of the SCM Agreement, as interpreted by panels in prior disputes, which is to determine whether a subsidy is sufficiently broadly available throughout an economy so as not to benefit "certain enterprises". It is difficult to rationalize how the division of a subsidy among what could be a very limited group, goes to the question of whether the subsidy is broadly available throughout an economy. Under the United States' approach, a subsidy may be granted to only two or three enterprises and as long as these two or three enterprises receive the subsidy in proportion to their relative economic contributions *as compared to each other,* the disproportionality analysis does not point to any problem of specificity. Taking the most extreme example, where one enterprise receives 100 per cent of the subsidy, this will never lead to a finding that the enterprise receives a disproportionately large amount of the subsidy, because the enterprise also makes up 100 per cent of the economic activity *of the subsidy recipients*.

7.766 The United States addresses this problem by contending that in circumstances where a single enterprise receives a subsidy, the relevant factor to consider under Article 2.1(c) is the "use of subsidy programme by a limited number of certain enterprises". Although there may be something to this argument, the problem remains that the United States' approach to disproportionality is limited to a group of selected recipients of a subsidy, divorced from their position in the wider economy. This is problematic given that the purpose of the specificity analysis, at least as interpreted in *US – Upland Cotton,* is to determine whether or not a subsidy is sufficiently broadly available *throughout an economy* and given that the final sentence of Article 2.1(c) requires the diversification of economic activities within the jurisdiction of the granting authority to be taken into account.

7.767 In our view, neither of the approaches suggested by the parties is completely satisfactory. It may be, given the approach that has been adopted with respect to specificity in prior panel, that there is no flawless way to conduct the disproportionately analysis. We note that a third possible option is advocated in this dispute by Australia.[2135] Under this approach, for the second ratio in the disproportionately analysis, the baseline group against which the economic position of the "certain enterprises" is compared is the group of entities that are *potentially* able to make use of the subsidy.[2136] This approach has the advantage that it seems to take into account the approach to the purpose of the specificity analysis that has been adopted in previous WTO case law. It is clear from previous panel reports that eligibility for a subsidy may be quite restricted and yet the subsidy not be specific under Article 2.1(a) or (b). The Australian approach recognizes this by excluding from the consideration in the de facto specificity context those enterprises that Article 2.1(a) and (b) deems possible to exclude from eligibility for the subsidy without creating a specific subsidy programme. However, the approach does not overcome the problem that whenever the denominators of the two ratios are not the same, namely when the actual recipients of the subsidy are less than the potential recipients, it will always be possible to find at least one set of "certain enterprises" that has been granted a disproportionate amount of subsidy. However, the problem should be less severe than under the European Communities' approach because the difference between the denominators of the two ratios will be smaller.[2137]

[2135] Australia's response to question 11.

[2136] Therefore, in cases where the subsidy has no explicit limits on eligibility, the denominator of the second ratio will be the entire economy.

[2137] Due to the exclusion from the denominator of the second ratio of those enterprises that are not eligible for the subsidy.

7.768 While we recognize the significant problems with the European Communities' approach to the disproportionality analysis, we acknowledge that it has at least some support in the text of Article 2.1(c) of the SCM Agreement. Further, the problem that *any* limit on the availability of the subsidy leads to a finding of disproportionality may be overcome somewhat if disproportion is interpreted to mean a *significant* disparity between the two relevant ratios, rather than any discrepancy, however small. This does not seem an unreasonable way to read Article 2.1(c) because, in any event, it would seem unduly strict to require exact correspondence between the proportion of subsidy granted to certain enterprises with the enterprises' relative economic importance, as judged by an unspecified economic indicator. In the circumstances of this case, given that the pool of eligibility for the IRBs is very wide, employing the Australian approach is unlikely significantly to alter the second statistic regarding the position of Boeing and Spirit in the overall economy.[2138]

7.769 In considering the specific facts of this case, the European Communities' position is that Boeing and Spirit received 69 per cent of the IRBs that included tax abatements in the period 1979-2005, but that in 2006 Spirit i.e. after it had acquired Boeing's LCA operations in Wichita accounted for 3.5 per cent of total employment or 16 per cent of manufacturing employment in Wichita. For the reasons expressed at paragraph 7.758 of this Report, namely that the SCM Agreement disciplines only the goods sector, we consider Boeing's proportion of employment within the manufacturing sector as the relevant statistic to consider. The United States argues that the statistics regarding employment levels are misleading because they reflect only Spirit's employment levels; during most of the period over which IRBs were issued, Boeing's employment levels were more than double those of Spirit in 2006. In response, the European Communities is prepared to accept this, but notes that the resulting figure, namely 32 per cent, is still disproportionate to the 69 per cent of IRBs that Boeing and Spirit were issued. We agree with the European Communities that there is a significant disparity between the proportion of IRBs received by Boeing and Spirit and their place within the goods sector of the economy, as indicated by the proportion of the sector they employ. While the United States argues that comparing the proportion of the subsidy received by Boeing and Spirit with the proportion of the economy they employ is not the fact-specific enquiry required for a specificity analysis, in our view, given the significance of the disparity between the figures, it constitutes a prima facie case of disproportionality. The United States has not provided a convincing rebuttal of this prima facie case. The United States argues, at a relatively high level of generality, that the degree of diversification in the Wichita economy is low. However, the United States does not present any statistics to indicate that Boeing and Spirit do indeed account for approximately 69 per cent of the economic activity in Wichita and that an examination of the employment levels of Boeing and Spirit is misleading in this regard. Therefore, we accept the European Communities' argument that Boeing and Spirit were granted disproportionately large amounts of the tax abatements available through the IRB bonds.

7.770 For these reasons, the Panel finds that Boeing and Spirit were granted a disproportionately large amount of the subsidy, indicating that the tax abatements are de facto specific to "certain enterprises".

Discretion

7.771 Article 2.1(c) provides that the Panel may consider the "manner in which discretion has been exercised by the granting authority in the decision to grant a subsidy" in determining whether a subsidy is de facto specific. The footnote to Article 2.1(c) states that in considering the way in which discretion has been exercised, "information on the frequency with which applications for a subsidy are refused or approved and the reasons for such decisions shall be considered".

[2138] City of Wichita/Sedgwick County Economic Development Incentives Policy, Exhibit EC-190, outlining the eligibility for IRBs.

7.772 The European Communities argues that the City of Wichita has exercised its discretion in favour of Boeing and Spirit in making its decisions to grant IRBs. In particular, the European Communities submits that Boeing and Spirit have received "special" IRBs in that they have not been true financing mechanisms, but merely a means to obtain tax abatements. Further, only Boeing and Spirit have received full ten-year property tax abatements, with no need for review and re-authorization at the five-year mark. Finally, the European Communities notes that the City of Wichita "exercises a certain amount of discretion in granting IRBs to begin with, as not all applications for IRBs are approved by the City Council" and notes as an example the denial of an application by Fitness 2000 24hr Health Club.[2139]

7.773 The submissions of the European Communities alleging that the subsidy is de facto specific because of the way in which the City of Wichita has exercised its discretion are not convincing. Article 2.1(c) refers to the way in which discretion has been exercised *in the decision to grant a subsidy*. Further, the footnote to Article 2.1(c) provides that, in this regard, the frequency with which applications are refused or approved and the reasons for such decisions must be considered. This indicates that the relevant discretion to which Article 2.1(c) refers is the decision about whether or not to approve or reject an application for a subsidy. Therefore, the European Communities' submissions regarding the *terms* on which IRBs issued to Boeing and Spirit were approved are not strictly relevant to this. In relation to the European Communities' submission that the City of Wichita once rejected an application from Fitness 2000 24hr Health Club, an analysis of the reason for this decision reveals that it was based upon the policy for granting economic incentives expressed in the City of Wichita Economic Development Incentive Policy.[2140] In particular, the application was rejected because Fitness 2000 did not directly generate new wealth in Wichita. IRBs are used by the City in order to encourage businesses that could locate elsewhere, to locate in Wichita. However, regardless of whether or not it was granted IRBs, Fitness 2000 was compelled to locate in Wichita in order to take advantage of the local consumer market. This reason does not demonstrate that the City used its discretion in a manner that renders the subsidy in fact specific to Boeing and Spirit. One example of a rejection of an application does not go far in proving de facto specificity.

7.774 Even if the "decision to grant a subsidy" is open to a wider interpretation than merely a decision to accept or reject a subsidy application, and also includes decisions regarding the terms on which a subsidy is granted, the two other allegations made by the European Communities regarding the way in which the City of Wichita has exercised its discretion are not convincing in support of a de facto specificity case. The European Communities argues that Boeing and Spirit are granted "special" IRBs because its IRBs are purely for the purpose of receiving tax abatements, rather than also being used as financing mechanisms. However, as the United States highlights, the decision that a company will purchase its own IRBs is a decision that the company itself makes, rather than being a matter in the discretion of a government body. Even it were a decision of the government, the United States submits evidence to indicate that a number of other companies hold their own IRBs.[2141]

7.775 The final submission of the European Communities regarding the manner in which the City of Wichita exercises its discretion is that the City of Wichita grants tax abatements to Boeing for ten year terms, without the requirement for review and re-authorization after five years, to which other companies are subjected. It is not entirely clear how this demonstrates de facto specificity. Perhaps the European Communities is suggesting that Boeing is granted a subsidy that is different to that granted to other companies and in this way, because Boeing is the only recipient of such a subsidy, it is specific. However, the European Communities does not make any submissions to support this notion. The fact that the terms on which a subsidy is granted may vary between recipients does not convert an otherwise broadly available subsidy into a specific subsidy. In any event, the United States

[2139] European Communities' first written submission, para. 339, footnote 542.
[2140] See Minutes of the Wichita City Council, 9 November 2004, Exhibit EC-191.
[2141] Minutes of Meeting of the City Council, Dec. 14, 2004, Exhibit US-247.

makes a convincing submission that, even though some other companies may be required to submit to a review after five years to assess whether the tax abatements should be re-authorized, in fact no company has ever been refused re-authorization. Therefore, although there is a difference in the terms of some IRBs, there is no practical effect arising out of this difference. The European Communities does not explain why imposing different terms on the grant of subsidies, where the practical effect of the terms is the same, should compel a finding of de facto specificity.

7.776 Therefore, consideration of the manner in which discretion has been exercised by the granting authority does not support a finding of de facto specificity.

Limited number of certain enterprises

7.777 In its response to the United States' submission that another company in Wichita apart from Boeing, namely Cessna Aircraft Company, received IRB issuances of approximately $1 billion, the European Communities introduces the argument that the subsidy was used by a limited number of certain enterprises. The European Communities submits that Boeing, Spirit and Cessna together received 78 per cent of the IRBs issued by the City of Wichita through 2005 and that this demonstrates limited use by certain companies. Although this statistic is relevant to the analysis regarding whether the subsidy was predominantly used by certain enterprises or was granted in disproportionate amounts to certain enterprises, it is not relevant to the assessment of whether the subsidy was used by a limited number of enterprises. In considering whether a subsidy programme is used by a limited number of certain enterprises, the focus is on the *number of enterprises* that use the programme, rather than the proportion of the subsidy granted to such enterprises.

7.778 In fact, an examination of Exhibit EC-26 indicates that at least 50 companies in Wichita received IRBs granting property tax abatements between 1979-2005.[2142] The European Communities does not make any submissions regarding why, in the light of the diversification of the Wichita economy and the length of time the IRB programme has been in operation, this constitutes use of the subsidy by a "limited number of certain enterprises". Therefore, consideration of whether the subsidy has been used by a limited number of certain enterprises does not support a finding of de facto specificity.

7.779 For these reasons, the Panel finds that the tax abatements have been granted in disproportionately large amounts to Boeing and Spirit. Therefore, the subsidies are de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.

(vi) The amount of the subsidy to Boeing's LCA division

Arguments of the European Communities

7.780 In its first written submission, the European Communities estimates that the amount of the benefit arising from the IRBs is at least $784 million from 1989 to 2019.[2143] Of this amount, the European Communities argues that $643 million was received directly by Boeing's LCA division and $141 million was passed-through from Spirit to Boeing's LCA division.[2144] The European Communities provides detailed submissions regarding how it calculated this estimate through the use of cost-benefit analyses performed by the City of Wichita.[2145] The

[2142] Sorted List of Wichita IRBs, 1979-2005, Exhibit EC-26. Many more companies have received IRBs that are used purely for financing purposes and do not include tax abatements.

[2143] European Communities' first written submission, para. 320.

[2144] European Communities' first written submission, paras. 321 and 323.

[2145] For example, the City of Wichita commissioned a cost-benefit analysis prior to issuing the 1999 LOI. The cost-benefit analysis found that the $1 billion in IRB issuances contemplated under the 1999 LOI would result in total property tax abatements of $165 million over 10 years. Relying on this analysis, the

European Communities asks the Panel to accept its estimate as the best information available and, where appropriate, to draw adverse inferences due to the United States' non-cooperation in the information-gathering process.[2146]

7.781 In relation to the IRB issuances to Boeing, the European Communities contends that Boeing received "substantial" sales tax exemptions on tangible personal property and services that it purchased with IRB proceeds. However, the European Communities is unable to calculate the amount of the benefit arising from the sales tax exemptions because, according to the Kansas Department of Revenue, Boeing's sales tax exemption certificates are confidential.[2147] The European Communities argues that the value of the sales tax exemptions is "likely substantial" because the bulk of the property acquired by Boeing with the IRB proceeds was personal property.[2148] For example, of the $96 million in IRBs issued on behalf of Boeing in December 2002, Boeing spent $92.6 million on personal property and consequently received $5.8 million in tax exemptions on this property alone.[2149]

7.782 The United States argues that the European Communities has overestimated the amount of the LCA-related tax abatements that arise following the issuance of IRBs. In particular, the United States contends that Boeing used some of its IRB proceeds to purchase property that does not relate to LCA, but rather relates to military operations. The European Communities rejects this argument and notes that the bond ordinances enacted in relation to the Boeing IRB issuances prior to 2005 were explicitly "for the purpose of providing funds for the acquisition, construction, reconstruction and improvement of certain industrial and manufacturing facilities of *Boeing Commercial Airplanes, Wichita Division"*.[2150] Therefore, using the IRBs to acquire property unrelated to Boeing LCA operations would have been contrary to the authorization provided by the Wichita City Council. According to the European Communities, Boeing's list of IRB Project Property confirms that the property acquired related to Boeing's LCA operations. No item of property listed stands out as unrelated to LCA and the United States does not point to any specific item to support its argument.[2151] Further, the European Communities rejects the United States' proposition that the references in the 2004 IRB lease agreement to the "security requirements of the United States" indicate that military rather than civil property was being acquired. Using the IRB proceeds for such a purpose would have violated the authorization granted by the City of Wichita.[2152]

7.783 Although the bond ordinances for IRBs issued post-2005 do not include the same authorization clause regarding the purpose for the use of the funds, the European Communities argues that there is no obvious difference between the types of property purchased pre and post-2005 and no evidence that after 2005 Boeing stopped using its IRB proceeds for the purchase of property used in manufacturing LCA.[2153] Since its sale of Boeing Wichita to Spirit, Boeing continues to own and furnish tooling at Spirit's facilities to help Spirit manufacture parts for Boeing LCA. Therefore, the

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European Communities calculates that the amount of property taxes foregone pursuant to an IRB issuance to Boeing is 16.5 per cent of the face value of the IRBs. The European Communities applies this estimate to the IRBs issued to Boeing to arrive at its estimate of $643 million in tax abatements received directly by Boeing.

[2146] European Communities' first written submission, paras. 321-325. See also, European Communities, Exhibit EC-23.

[2147] European Communities' first written submission, para. 322.

[2148] European Communities' first written submission, para. 322.

[2149] European Communities' first written submission, para. 322.

[2150] European Communities' second written submission, para. 225 and European Communities' comments on United States' response to question 253, para. 370.

[2151] European Communities' comments on United States' response to question 253, para. 370.

[2152] European Communities' comments on United States' response to question 253, para. 371.

[2153] European Communities' comments on United States' response to question 253, para. 372 and European Communities' second written submission, para. 226.

European Communities concludes that there is no reason to believe that any of the property acquired by Boeing, either before or after 2005, relates to non-LCA operations.[2154]

7.784 The United States also submits that future tax savings are speculative and lower than the European Communities' estimates because of the decreased appeal of the IRBs as a result of the changes in the Kansas taxation legislation, exempting newly acquired commercial and industrial machinery and equipment from property tax. The European Communities argues that the future tax savings are not speculative because the IRBs issued between 1997-2006 provide guaranteed tax abatements from 2007 until 2016 with respect to already purchased property (and therefore property not affected by the change to Kansas taxation law). Therefore, these tax savings are not speculative.[2155] Further, in relation to future IRB issuances, the European Communities argues that there is no reason to believe that these will have less appeal as a result of the amendment to the Kansas property tax law. In response to the United States' point that the European Communities' estimate of the amount of IRBs issued in 2007 was inaccurate, the European Communities argues that there are many possible reasons to explain this, including Boeing's difficulties with its 787 production.[2156] The European Communities continues that "once 787 production ramps up, it is likely that Boeing and Spirit will need to utilize the full authorized amounts of IRBs".[2157] The European Communities concludes that the United States has not rebutted its prima facie case regarding the estimate of the future amount of IRB issuances.[2158]

7.785 The European Communities also refutes the United States' submission that tax savings from future Boeing IRBs are overstated because Boeing no longer has LCA operations in Kansas. The European Communities argues that there is "every reason to believe that Boeing will take full advantage of the amount of IRBs to which it is entitled pursuant to its 1999 LOI despite the sale of its LCA facilities in Wichita to Spirit".[2159] According to the European Communities, since the sale of Boeing Wichita, Boeing has indeed continued to use IRBs to purchase equipment related to LCA manufacturing.[2160]

7.786 With respect to its pass-through case, the European Communities relies on the same legal analysis as it used in relation to the Washington B&O tax reduction. In particular, relying on *US – Upland Cotton,* the European Communities argues that it needs to demonstrate that the benefits of the tax abatements received by Spirit passed-through to the Boeing LCA division in order to demonstrate that the subsidy benefits the product alleged to be causing serious prejudice under Articles 5 and 6 of the SCM Agreement.[2161]

7.787 The European Communities' case is that at the time of the sale of Boeing Wichita to Spirit, both parties to the transaction had a reasonable expectation that there would be future IRB issuances to the entity to be sold, and consequent tax abatements to Spirit. This future expected benefit stream would have been factored into the valuation of Boeing Wichita.[2162] The European Communities argues that Boeing captured the full value of the future subsidies to Spirit through negotiating, as a term of the sale, long-term supply contracts with Spirit at discounted prices of supply.[2163] Although it is not entirely clear from the European Communities' submissions whether it argues that pass-through

[2154] European Communities' second written submission, para. 226.
[2155] European Communities' second written submission, para. 228.
[2156] European Communities' second written submission, para. 229 and European Communities' comments on United States' response to question 253, para. 374.
[2157] European Communities' comments on United States' response to question 253, para. 374.
[2158] European Communities' comments on United States' response to question 253, para. 374.
[2159] European Communities' second written submission, para. 230.
[2160] European Communities' second written submission, para. 230.
[2161] European Communities' response to question 137.
[2162] European Communities' second written submission, para. 236.
[2163] European Communities' first written submission, para. 296.

also occurred through the price paid by Spirit for Boeing Wichita, the European Communities' response to question 44 clarifies that only pass-through via the long-term supply contracts is in issue. Although in response to this question the European Communities contends that it is possible pass-through occurred through a lump-sum payment at the time of sale, in the absence of documents to establish this, the European Communities asks the Panel to assume that the pass-through occurred via the long-term supply contracts.[2164]

7.788 The European Communities refers to a "close" and "special" relationship between Boeing and Spirit.[2165] In response to Panel questioning in relation to this, the European Communities responds that the sale of Boeing Wichita was an arm's length fair market value transaction between two independent companies. However, the resulting long-term supply agreements do not operate at arm's length; the prices charged under the contracts are lower than would otherwise be the case.[2166]

7.789 To support its pass-through argument, the European Communities relies on a report prepared by Professor Wachtel, which concludes that "the economics literature on asset pricing leaves no doubt that the terms and conditions of the sale of a real capital asset, such as Boeing's commercial airplane facilities in Wichita, would reflect the benefit stream expected to accrue to the new owner from future expected subsidies" and that "there is every reason to believe that Boeing realized the discounted value of the expected subsidies pursuant to the terms and conditions of its sales contract with Spirit".[2167]

7.790 In contrast to the United States' submission, the European Communities contends that the terms of the sale contract were finalized *after* the State of Kansas released the letter of intent to issue IRBs to Spirit.[2168] The European Communities acknowledges that the Asset Purchase Agreement for the sale of Boeing Wichita was signed on 22 February 2005 and that the letter of intent for the issuance of IRBs to Spirit was released on 25 May 2005. However, according to the European Communities, the terms of the deal were not final until the transaction closed on 16 June 2005. The European Communities argues that, in any event, the precise timeline of events is not as important as the *expectations* of the parties at the time they negotiated and finalized the deal. The European Communities concludes that Boeing and Spirit would have expected IRBs to be issued to Spirit following the sale.[2169] The European Communities notes that Boeing's IRB applications had been approved every year without fail since 1979. As Boeing's successor, Spirit had every reason to expect that its application for IRBs would also be approved. Further, at the time of sale, the parties had "solid expectations" about Spirit's future property needs and consequently about Spirit's future IRB needs.[2170] The terms of conditions of the sale would have reflected these expectations.

7.791 In response to the United States' submission that a number of years after the sale, the Boeing Wichita facility was valued at a higher figure than the price paid by Spirit in the sale, the European Communities argues that there is no evidence that this difference had anything to do with the expected subsidies. Given that the expected subsidies were public knowledge at the time of the sale, they could not be the source of the information asymmetry.[2171]

[2164] European Communities' response to question 44, para. 136.
[2165] European Communities' first written submission, paras. 290-292.
[2166] European Communities' response to question 45, para. 137.
[2167] Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, Exhibit EC-16, pp. 4 and 5.
[2168] European Communities' second written submission, para. 237.
[2169] European Communities' second written submission, para. 238.
[2170] European Communities' second written submission, paras. 239-240.
[2171] European Communities' comments on United States' response to question 367, para. 189.

7.792 In response to the United States' point that Spirit also currently supplies Airbus, the European Communities contends that this is irrelevant.[2172] If anything, the fact that at the time of the sale Spirit had indicated that it would also supply Airbus meant that both parties to the transaction expected Spirit to receive further IRB benefits in relation to the additional property required by Spirit to fulfil Airbus' orders. These expected additional IRB-related tax abatements would have been passed through to Boeing in the terms and conditions of sale.[2173]

7.793 In its first written submission the European Communities relies on an economic theory very similar to the reasoning underlying one of the "privatization cases", namely *US – Countervailing Measures on Certain EC Products*, to argue that the benefits associated with the Kansas subsidies accrue to Boeing.[2174] In response to Panel questioning, the European Communities confirms that the reasoning in *US - Countervailing Measures on Certain EC Products* is applicable to the question of pass-through of the Kansas subsidies.[2175] The rationale behind the decisions in the privatization cases seems to be that if an entity that has benefited from a subsidy is bought at arm's length and for fair market value, the benefit associated with the financial contribution will be reflected in the terms of the sale, for example, through a higher sale price. In other words, by paying fair market price for the subsidized entity, the purchaser cannot be considered better off than in the absence of the financial contribution, or at least it cannot be presumed that the subsidy passes-through to the purchaser. The seller of the entity receives the benefit associated with the subsidy through the terms of sale. The European Communities argues that the reasoning is applicable to the sale of Boeing Wichita.[2176] Contrary to the United States' submission, the European Communities contends that it is even more certain in a transaction between two private parties, as opposed to the sale of a government asset, that the benefit of the subsidy will remain with the seller.[2177] To support this argument, the European Communities notes the Appellate Body's statement in *US – Countervailing Measures on Certain EC Products* that:

> "The Panel's absolute rule of 'no benefit' *may be defensible in the context of transactions between two private parties* taking place in reasonably competitive markets; however, it overlooks the ability of governments to obtain certain results from markets by shaping the circumstances and conditions in which markets operate."[2178]

7.794 According to the European Communities, this indicates that although it may not be appropriate to make an automatic finding that a subsidy is extinguished in the case of a privatization transaction where the market is distorted by government intervention, this is not the case where the transaction is between two private entities.[2179] Further, the European Communities notes that in administering its own domestic countervailing duty regime, the United States allows a party, in both *private sales* and in government privatizations, to demonstrate that subsidies to a company are extinguished upon sale of the company in an "arm's length transaction for fair market value". A United States' document describing the methodology it uses in this regard provides that in determining whether a transaction was for fair market value USDOC will normally examine whether the seller acted in a manner consistent with the normal sales practices of private commercial sellers. The document states that "where an arm's length sale occurs between purely private parties, we would

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[2172] European Communities' second written submission, para. 245.
[2173] European Communities' second written submission, para. 245.
[2174] Panel Report, *US – Countervailing Measures on Certain EC Products*.
[2175] European Communities' comments on United States' response to question 367.
[2176] European Communities' comments on United States' response to question 367.
[2177] European Communities' comments on United States' response to question 367, paras. 184-186.
[2178] European Communities' comments on United States' response to question 367, para. 186 (emphasis added by the European Communities).
[2179] European Communities' comments on United States' response to question 367, para. 186.

normally expect the private seller to act in a manner consistent with the normal sales practices of private, commercial sellers in that country. With regard to a government-to-private transaction, however … we cannot make that same assumption".[2180]

7.795 Although the reasoning in *US – Countervailing Measures on Certain EC Products* relates to subsidies granted in the past rather than the expected value of subsidies to be granted in the future, the European Communities argues that this is not relevant because both types of subsidies have a present value at the time of sale of the asset in question.[2181]

7.796 According to the European Communities, it has established a prima facie case that the benefit of future IRB issuances to Spirit passed-through to Boeing's LCA division.[2182] The European Communities notes that the United States has refused to supply it with unredacted copies of all of the relevant long-term supply agreements to support its pass-through analysis and has not provided any information regarding how the pricing for supplies in the long-term supply agreements was derived.[2183] However, the European Communities argues that this information is not strictly necessary to demonstrate pass-through and that it has made a prima facie case in any event, which the United States has failed to rebut.[2184] In its view, the best information publicly available regarding the supply contracts indicates that pass-through occurred via the terms of the agreements.[2185]

Arguments of the United States

7.797 The United States' primary argument is that the tax breaks that arise following the issuance of IRBs are not actionable subsidies. If the Panel were to find otherwise, the United States' position is that the European Communities' estimate of the tax abatements to Boeing's LCA division is significantly inflated.[2186]

7.798 The United States argues that some of the IRBs have been issued with respect to property that does not relate to large commercial aircraft. Boeing has substantial facilities in Wichita that relate to its military business. The United States argues that the lease agreements between Boeing and Wichita demonstrate that some IRB proceeds were used for property connected with military aircraft operations. For example, the 2004 lease agreement provides that the issuer may inspect the IRB property, books and records of the lessee, "subject to the security requirements of the United States Government" and that "no person shall…reveal…any national security, trade secret, confidential or other information…which, if disclosed, might put the lessee in violation of law". The United States submits that this indicates that military property and data are in issue because Boeing could not be in "violation of law" for disclosing its own technical data.[2187]

7.799 The United States submits that the European Communities' estimates of future benefits are "speculative". In relation to most of the Spirit IRBs and some of the Boeing IRBs, the European Communities' estimates are based on IRBs that have not yet been issued. Whether Spirit will actually seek IRB issuances based on the LOI will depend on its rate of expansion and need for new property.[2188] Further, the appeal of the IRBs is reduced in the light of the amendment to the

[2180] European Communities' comments on United States' response to question 367, para. 187.
[2181] European Communities' comments on United States' response to question 367, para. 188.
[2182] European Communities' second written submission, para. 246.
[2183] European Communities' comments on United States' response to question 47, paras. 157, 158.
[2184] European Communities' comments on United States' response to question 252, para. 365.
[2185] European Communities' second written submission, para. 242; European Communities' comments on United States' response to question 47, paras. 160-163.
[2186] United States' first written submission, para. 637.
[2187] United States' first written submission, para. 638 and United States' response to question 253, para. 430 and footnote 562.
[2188] United States' first written submission, para. 640.

Kansas taxation law that exempts certain property from taxation in any event.[2189] In relation to this amendment, the estimate of the benefits flowing from future IRBs needs to be adjusted to account for the fact that there is no longer a tax advantage associated with commercial and industrial machinery and equipment.[2190]

7.800 The European Communities' estimate also assumes that in 2007 and 2008 Boeing fully utilizes its LOI and finances more than $600 million worth of property in Kansas under new IRB issuances. According to the United States, this lacks credibility because Boeing no longer has LCA operations in Kansas.[2191] Further, the reality is that, although the European Communities estimated that Boeing would apply for and receive $301.5 million in IRBs in 2007, it actually applied for and received only $12 million in IRBs in 2007 and that was in connection with its military aircraft facility. The European Communities estimated that Spirit would apply for and receive $222.7 million in IRBs in 2007, but in fact Spirit did not apply for or receive any IRBs.[2192] According to the United States, the enormous discrepancies between the European Communities' estimates and what actually occurred in 2007 demonstrate that the rest of its estimates are "completely unreliable".[2193]

7.801 The United States also argues that the European Communities has not proven pass-through to Boeing's LCA division of the benefits of the tax breaks received by Spirit and therefore the estimate of the benefit accruing to Boeing's LCA division as a result of the tax abatements should be adjusted to reflect this.[2194]

7.802 The United States repeats its argument that revenue to be foregone in the future "does not meet the definition of a financial contribution within the meaning of Article 1.1(a)(1)(ii)" and therefore should not be included in any quantification of the amount of the alleged subsidy.[2195]

7.803 In relation to the European Communities' pass-through case, the United States relies on the same legal basis for a requirement to demonstrate pass-through as it did in relation to the Washington B&O tax rate reductions. In particular, the United States cites *US – Softwood Lumber IV* as authority for the point that when an upstream supplier of an input receives a subsidy and sells the input in an arms-length transaction to an unrelated entity that produces the allegedly subsidized product, pass-through cannot be assumed but must be proven. This is necessary in order to demonstrate that the elements of the subsidy definition are present in relation to the processed product.[2196]

7.804 The United States argues that the European Communities has not demonstrated that the long-term supply contracts were anything apart from arm's length. Therefore, the European Communities is required to establish pass-through and it has failed to do so.[2197]

7.805 The United States contends that relying on a theoretical economic analysis that merely assumes pass-through is not sufficient to prove pass-through of the benefit of the alleged subsidy.[2198] According to the United States, the European Communities' pass-through case rests solely on the expert report prepared by Professor Wachtel, which is based upon a specific set of economic and market assumptions that do not relate to the facts of this case.

[2189] United States' first written submission, para. 641.
[2190] United States' first written submission, para. 642.
[2191] United States' first written submission, para. 643.
[2192] United States' response to question 253, para. 431.
[2193] United States' response to question 253, para. 431.
[2194] United States' response to question 253, para. 433.
[2195] United States' response to question 253, para. 432 and United States' first written submission, para. 639.
[2196] United States' first written submission, para. 625.
[2197] United States' comments on European Communities' response to question 45, para. 152.
[2198] United States' comments on European Communities' response to question 44, para. 144.

7.806 Further, the economic reasoning relied upon by the European Communities is flawed and Professor Wachtel comes only to a tentative conclusion that pass-through would actually have occurred.[2199] According to Professor Wachtel, the parties, in their calculation of Boeing Wichita's net present value, would have included the future tax abatements from the IRBs. The United States contends that, even if this were the case, there is a difference between the valuation of an asset and the price paid. If the price fully reflected the value of an asset, there would be no incentive to invest in it. There needs to be a difference between perceived value and price for investment to occur.[2200] The United States also argues that even if valuation were relevant to the issue of pass-through, the European Communities' approach to valuation is too simplistic. The United States' contends that valuation depends on the information available to those performing the valuation and that market actors make individual choices regarding how to value certain information and what risk factors to consider in discounting future values to the present. A valuation is coloured by assumptions about the future of the economy and the company. Therefore, the European Communities cannot know how Spirit and Boeing would each have valued the Wichita facility and whether they would have taken the IRBs into account in making the valuation.[2201] The United States refers to Boeing's 2005 financial report, which indicates that Boeing recorded a net loss on the sale of the Boeing Wichita facility.[2202] It argues that this confirms that Spirit purchased the asset for less than the value that could have been attributed to it. Further, the sale price for the facility in June 2005 was $1.1 billion, while its valuation at 31 December 2007 was $3.3 billion. The United States contends that this indicates that not all future value was included in the price Spirit paid for the Boeing Wichita facility.[2203]

7.807 According to the United States, the European Communities' economic analysis is based on a "mistaken factual assumption".[2204] At the time the price of sale was agreed, namely when the Asset Purchase Agreement was signed in February 2005, Spirit had not even applied for IRBs, much less received authorization or approval for their issuance. The City of Wichita issued the letter of intent in May 2005, after the price for the asset was agreed upon. In addition, the letter of intent was not a commitment to issue the bonds and therefore, at the time of sale, there was no certainty that the IRBs would be issued to Spirit. Therefore, there is no basis to conclude that any future IRB benefits would have been factored into the sale price.[2205]

7.808 The United States argues that the European Communities' theory of pass-through is also flawed because at the time of sale of Boeing Wichita to Spirit, the amount of any benefit to Spirit from future IRB issuances was uncertain. IRBs are issued only up to the value of the relevant property being purchased and it could not have been known in advance what Sprit's future property needs were. Therefore, even if at the time the transaction was negotiated there was some expectation that Spirit would receive future IRBs, there is no basis to determine how this might have been reflected in the sale price.[2206] Further, Professor Wachtel ignores evidence of the elements that *did* play a role in the valuation of the Boeing Wichita facility. The United States argues that publicly available information indicates that possibilities of renegotiation of union contracts and the growth that Spirit believed could be achieved through customer diversification and increased outsourcing were key value drivers for the transaction. There is "clear evidence" that such factors were considered

[2199] United States' first written submission, paras. 589 and 635.
[2200] United States' first written submission, para. 636 and United States' response to question 255, para. 441.
[2201] United States' response to question 255, footnote 576.
[2202] United States' response to question 367, para. 214.
[2203] United States' response to question 367, para. 214, footnote 262.
[2204] United States' first written submission, para. 629.
[2205] United States' first written submission, paras. 628-631.
[2206] United States' first written submission, paras. 630-631.

during the valuation process, but no such evidence to suggest the same was true in relation to alleged future IRB values.[2207]

7.809 The United States notes that at the time of the transaction, Spirit indicated its intention to supply Airbus in the future and now does so.[2208] In fact, Spirit now supplies more to Airbus than to Boeing and there is a "very close relationship" between the two companies.[2209] The European Communities does not highlight anything in the long-term supply contracts to suggest all IRB related tax abatements are passed through to Boeing rather than to another customer.[2210]

7.810 In response to a Panel question, the United States argues that the economic reasoning used by the panel in *US – Countervailing Measures on Certain EC Products* does not apply to the transaction between Boeing and Spirit because the facts of *US – Countervailing Measures on Certain EC Products* are distinguishable. The panel and the Appellate Body in that case stated that the decision was confined to its very precise set of facts, which was a "privatization … where the government transferred all or substantially all the property and retained no controlling interest in the firm" and a "benefit originating from a non-recurring financial contribution bestowed on a state-owned enterprise *before* privatization".[2211] The United States argues that there is no basis to apply the reasoning that was used for this specific set of facts to the sale of Boeing Wichita.[2212]

7.811 The United States contends that even if the Panel were to consider the reasoning in *US – Countervailing Measures on Certain EC Products,* this would still lead to the conclusion that there was no pass-through of the future subsidies. This is because the panel's reasoning in *US – Countervailing Measures on Certain EC Products* was premised on the assumption that the alleged benefit, arising from a *past* subsidy, was fully reflected in the balance sheet of the privatized company.[2213] The United States argues that it is not at all clear that this was the case for the alleged future benefits arising out of the IRBs. It is not certain that potential *future* benefits are reflected in the balance sheet of an asset.[2214] The United States notes that even if the future benefits were reflected in the balance sheet of Boeing Wichita, the price paid for an asset does not necessarily equate to value. Finally, even if the Panel were to extend the presumption used in the privatization cases to the facts of this case, the United States notes that the presumption used by the Appellate Body in *US – Countervailing Measures on Certain EC Products* was a rebuttable one and that the United States has rebutted the European Communities allegations of pass-through.[2215]

7.812 In response to the European Communities' contention that the United States has withheld the long-term supply contracts, the United States notes that it has provided the documents, redacted to protect very sensitive commercial information, and that the contracts are also readily available on the website of the US Securities and Exchange Commission. The continued request by the European Communities for unredacted versions of the documents and for information about negotiations is merely a fishing expedition.[2216]

[2207] United States' response to question 367, para. 216.
[2208] United States' first written submission, para. 632.
[2209] United States' first written submission, para. 593.
[2210] United States' first written submission, para. 632.
[2211] United States' response to question 367, paras. 218-219.
[2212] United States' response to question 367, para. 219.
[2213] United States' response to question 367, para. 220.
[2214] United States' response to question 367, para. 221.
[2215] United States' response to question 367, para. 223.
[2216] United States' response to question 252, paras. 425-427.

BCI deleted, as indicated **[***]**

Evaluation by the Panel

7.813 In relation to whether the European Communities' estimates of "future" benefits are "speculative" and unreliable, we refer to our analysis of the Washington HB 2294 taxation measures at paragraphs 7.155-7.158 of this Report. As there indicated, for the purposes of its present serious prejudice analysis, the European Communities makes no use of post-2006 amounts, except for those subsidies that reduce Boeing's marginal unit costs, which does not include the tax abatements associated with the IRBs. Further, the Panel's own analysis of the present serious prejudice claim places no reliance upon post-2006 subsidy amounts.[2217] Finally, as indicated at paragraphs 7.1851-7.1853 of this Report, the Panel exercises judicial economy in relation to the threat section of the European Communities' serious prejudice case. For these reasons, it is necessary for the Panel to quantify the amount of the subsidies only through until the end of 2006. Consequently, we do not need to rule upon the reliability of the European Communities' post-2006 estimates.

7.814 With respect to the amount of the subsidy received directly by Boeing's LCA division, in the view of the Panel, the European Communities' use of the City of Wichita's cost-benefit analyses in order to estimate the amount of the subsidy is based upon the best information available. Further, we note that the United States does not object to the use made by the European Communities of the cost-benefit analyses in deriving its estimates.

7.815 However, the United States contends that the estimates include subsidies not only to the Boeing LCA division, but also to Boeing's military division. To rebut this argument, the European Communities refers to the Ordinances under which the IRB issuances were made. All the Ordinances enacted pre-2005 include an explicit statement that the IRBs were issued "for the purpose of providing funds for the acquisition, construction, reconstruction and improvement of certain industrial and manufacturing facilities of *Boeing Commercial Airplanes, Wichita Division"*.[2218] In our view, this is strong evidence to indicate that the tax breaks arising out of IRBs issued pre-2005 were for the benefit of the Boeing LCA division and could not have been used to purchase property for military purposes. The evidence that the United States relies upon in asserting the contrary is not convincing. The United States refers to lists of Project Property bought with IRB proceeds and asserts that because the lists indicate that the Project Property was purchased "for the manufacture, modification, maintenance, and storage of aircraft and components", this could include both civil and military operations.[2219] However, the United States does not identify any property within the lists that is necessarily related to Boeing's military operations. The United States also contends that the lease agreements between Boeing and the City of Wichita indicate that some Project Property was used in Boeing's military operations. In this regard, the United States cites the provisions in the lease agreements authorizing the Issuer of the IRBs to inspect IRB property, as well as to examine the books and records of the Lessee "subject to security requirements of the United States Government" and providing that "no person shall be entitled to … reveal to any person any national security, trade secret, confidential or other information which has not otherwise been made public and which, if disclosed, might put Lessee in violation of law or at a competitive disadvantage".[2220] According to the United States, these provisions "clearly refer" to the United States' ITAR requirements, which are applicable to defence articles.[2221] However, in the light of the restrictive authorization in the IRB

[2217] See paras. 7.1812-7.1813 of this Report.

[2218] Wichita City Council Ordinance Nos. 47-280 (2006), 46-817 (2005), 46-401 (2004), 45-914 (2003), 45-495 (2002), 45-133 (2001), 44-811 (2000), 44-428 (1999), 44-102 (1998), 43-642 (1997), 43-325 (1996), 42-949 (1995), 42-553 (1994), 42-228 (1993), 41-916 (1992), and 41-592 (1991), Exhibit EC-179.

[2219] United States' response to question 253, para. 430, citing Exhibit A to the Boeing IRB Lease Agreements from 1994-2005, Exhibit EC-187.

[2220] United States' response to question 253, para. 430 footnote 562, citing Lease Agreement between the City of Wichita, Kansas, and the Boeing Company, dated as of 1 December 2004, Exhibit EC-180 Section 7.02.

[2221] United States' response to question 253, para. 430 footnote 562.

Ordinances enacted pre-2005, requiring IRB funds to be used for the purpose of Boeing's LCA operations, and given that the provisions cited by the United States do not explicitly mention ITAR or military operations, we are not convinced that the tax breaks arising from IRBs issued pre-2005 benefited Boeing's military division rather than its LCA division.

7.816 We note that the Ordinances relating to IRBs issued from 2005 and beyond do not explicitly limit the use of the IRB funds to Boeing's commercial operations.[2222] The Panel recalls that it is necessary to quantify the tax breaks received by Boeing's LCA division only through until the end of 2006. The only IRBs issued from 2005 and beyond that give rise to tax breaks before the end of 2006 are those issued in 2005. The amount of these tax breaks is $0.5 million.[2223] The only additional evidence relied upon by the United States relating to the period post-2004 is a reference to a webpage which includes the Minutes of Wichita City Council proceedings in November 2007 (not provided as an exhibit by the United States), including minutes of a public hearing regarding the 2007 IRB issuance to Boeing.[2224] Although the minutes include a statement that Boeing needs to acquire advanced technologies in order to compete for military engineering work, as the minutes relate to an IRB issuance in 2007 we do not find them probative of the use to which the funds from the 2005 IRB issuance were put. In these circumstances, after reviewing all of the evidence, we are inclined to accept the European Communities' submission that post-2005, Boeing continued to purchase the same type of property and continued to locate such property at the Wichita LCA facility.[2225] The Panel notes that there is no evidence to suggest a change in the use to which IRB funds were put in 2005 compared with pre-2005. As a result, we are prepared to include in the estimate of the amount of the subsidy the $0.5 million in issue.

7.817 Finally, we recall the European Communities' argument that, in addition to the property tax breaks, Boeing's LCA division received "substantial sales tax exemptions" arising out of the IRB scheme. However, the European Communities argues it is unable to estimate the value of these exemptions because, according to the Kansas Department of Revenue, Boeing's sales tax exemption certificates are confidential.[2226] Although the European Communities requests that the Panel draw adverse inferences due to the United States' non-cooperation in the information gathering process[2227], we do not consider it necessary to attribute a precise value to the sales tax exemptions received by Boeing. The Panel has no information before it to make an accurate estimate and, in any event, arriving at an estimate would not effect our conclusions in relation to the European Communities' serious prejudice claim.

7.818 We recall that for the reasons expressed at paragraph 7.214, we address the issue of "pass-through" in the sections quantifying the amounts of the relevant subsidies. In relation to the European Communities' pass-through case for the tax breaks arising from the IRB bonds, given that the European Communities relies upon the same economic analysis to prove pass-through of the benefit arising from the KDFA bonds, we include our findings on this issue in the section quantifying the amount of the KDFA bonds.[2228] In that section we do not accept the European Communities' pass-through arguments and therefore the benefit to Boeing's LCA division from the tax breaks which arise

[2222] Wichita City Council Ordinance Nos. 47-280 (2006), 46-817 (2005), 46-401 (2004), 45-914 (2003), 45-495 (2002), 45-133 (2001), 44-811 (2000), 44-428 (1999), 44-102 (1998), 43-642 (1997), 43-325 (1996), 42-949 (1995), 42-553 (1994), 42-228 (1993), 41-916 (1992), and 41-592 (1991), Exhibit EC-179.

[2223] Estimates of Tax Benefits from Wichita IRBs, Exhibit EC-23, breaks down the tax benefits arising, each year, from IRBs issued in each year from 1979-2019.

[2224] United States' response to question 253, para. 431 footnote 564.

[2225] European Communities' comments on United States' response to question 253, para. 372.

[2226] European Communities' first written submission, para. 322.

[2227] European Communities' first written submission, para. 325.

[2228] See analysis commencing at para. 7.857.

from the IRBs is the amount directly received by Boeing's LCA division over the period 1989-2006, namely $475.8 million.[2229]

(vii) Conclusion

7.819 **For these reasons, the Panel finds that the tax breaks arising from the issuance of IRBs, introduced by the State of Kansas and municipalities therein, are a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement. The Panel estimates that the amount of the subsidy to Boeing's LCA division is $475.8 million.**

(b) Direct transfer of funds arising from the Kansas Development Finance Authority bonds

(i) Introduction

7.820 The European Communities argues that certain payments made by the State of Kansas following the issuance of Kansas Development Finance Authority Bonds ("KDFA bonds") constitute either a direct transfer of funds under Article 1.1(a)(1)(i) or the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement. Although the financial contribution is received by Spirit, the European Communities argues that the benefit has passed-through to Boeing. The European Communities estimates the benefit to Boeing to be $122 million over the period 2005-2024.

7.821 Although the United States accepts that a financial contribution exists in relation to the payments, the United States argues that the payments are made to Spirit and that the benefit does not pass-through to Boeing.

(ii) The measure at issue

7.822 In 2003 the Kansas State legislature adopted the Economic Revitalization and Reinvestment Act ("ERRA"), codified as KSA §74-50,136. It authorizes the Kansas Development Finance Authority ("the Authority") to issue up to $500 million in bonds ("KDFA bonds") on behalf of an "eligible business" for an "eligible project".

7.823 Under the ERRA, an "eligible business" is:[2230]

> "A person, corporation, partnership or other entity doing business in Kansas that satisfies conditions imposed by the secretary, which may include, among other conditions, that the corporation, partnership or other entity:
>
> (A) Paid at least $600,000,000 in average annual gross Kansas compensation…during the base eligibility period {i.e. during the three taxable years immediately preceding the date of application for benefits under the ERRA}; and
>
> (B) paid at least $50,000 of average annual gross compensation per Kansas employee during the base eligibility period; and

[2229] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17 provides the estimate of the value of the IRB tax breaks to Boeing over the period 1989-2006 ("Past Amount" column, p. 3). From this amount ($476.9 million) we subtract the amount estimated to be received by Spirit during this period, due to our conclusion that the benefit to Spirit does not "pass-through" to Boeing. The amount received by Spirit over the period 1989-2006 can be found in Estimates of Tax Benefits from Wichita IRBs, Exhibit EC-23, in the row entitled "Tax Benefit from Spirit IRBs" ($1.1 million).

[2230] Kan. Stat. Ann. § 74-50,136 (2004), Exhibit EC-207.

BCI deleted, as indicated **[***]**

> (C) has invested at least $1,000,000,000 in real and tangible personal property located within and currently used in the operation of a business in Kansas; and
>
> (D) is described by north American industrial classification system as being in the manufacturing sector." [2231]

An "eligible project" is defined as:

> "A research, development, engineering or manufacturing project:
>
> (A) undertaken by an eligible business relating to the development of a new or improved business component or product…
>
> (B) for which the eligible business proposes to invest not less than $500,000,000 in Kansas in direct connection with the eligible project …; and
>
> (C) for which the eligible business proposes to employ up to 4,000 full-time employees in Kansas." [2232]

The ERRA provides that no new "eligible project" shall be approved for financing after 1 July 2005.

7.824 Under the terms of the ERRA, an eligible business that enters an agreement to receive the proceeds of KDFA bonds to fund an "eligible project" commits to repay the principal and the interest on such funds. However, the State of Kansas credits a "special economic revitalization fund", created in the custody of the state treasurer, with the income taxes withheld from employees of an eligible business. The withheld income taxes in this fund are used to pay the interest due on the bonds. The "eligible business" is obligated to pay only that interest, if any, that exceeds the revenue collected as withheld income taxes from the "eligible business".

7.825 Spirit filed an application for KDFA bond financing in May 2005. In response, on 9 June 2005, seven days prior to Boeing's sale of Boeing Wichita to Spirit, the Authority signed a "Resolution of Intent" to issue KDFA bonds on behalf of Spirit, in an amount not exceeding $500 million.[2233] On 30 June 2005, the Kansas Department of Commerce and Spirit reached an agreement regarding the terms of the bond issuance. As a result, on 5 December 2005, the first tranche of bonds to fund Spirit's "eligible project", namely the development of parts for the 787, was issued in the amount of $80 million, at an interest rate of 8.5 per cent per annum.[2234]

7.826 Spirit's application for financing reveals that, in a similar manner to the IRBs, it does not use the KDFA bonds as a true financing mechanism. Rather than a third party buying the bonds and Spirit receiving the proceeds of sale to finance the eligible project, Spirit purchases its own bonds.[2235] The funds used by Spirit to purchase the bonds are then loaned back to Spirit. The interest and the repayment of the principal are owed to the owner of the bonds, namely Spirit. However, Spirit is able to file a "set-off acknowledgment" so that it is not required to make the loan payments to itself and so that the only flow of funds is the transfer to Spirit of the tax withheld from Spirit's employees as the interest payments on the bonds.[2236]

[2231] European Communities' first written submission, para. 343 and Kan. Stat. Ann. § 74-50,136 (2004), Exhibit EC-207.
[2232] Kan. Stat. Ann. § 74-50,136 (2004), Exhibit EC-207.
[2233] European Communities' first written submission, para. 348.
[2234] European Communities' first written submission, para. 348.
[2235] European Communities' first written submission, paras. 350-352.
[2236] European Communities' first written submission, paras. 350-352.

BCI deleted, as indicated **[***]**

(iii) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

Arguments of the European Communities

7.827 According to the European Communities, the net effect of the KDFA bond issuances is that "the State of Kansas provides grants to Spirit out of the tax withholdings from Spirit's employees for the benefit of the 787 parts that Spirit will manufacture for Boeing".[2237] The European Communities argues that the commitment by the State of Kansas to pay interest due on the bonds issued on behalf of Spirit constitutes a financial contribution under Article 1.1(a)(1) of the SCM Agreement. The financial contribution can be characterized as a direct or potential direct transfer of funds under Article 1.1(a)(1)(i) or as the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii).[2238] As Spirit holds its own bonds, Spirit receives a direct grant from the State in the amount of the interest due on the bonds, which is a direct transfer of funds under Article 1.1(a)(1)(i). Further, because the State of Kansas uses income tax withholdings to pay the interest on the bonds, it forgoes tax revenue that it would otherwise collect, which constitutes a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement.[2239]

7.828 The European Communities argues that Spirit is not required to pay anything in return for the interest payments it receives pursuant to the KDFA bonds and that the "substantial advantages conferred … by these KDFA bonds that relate to the production of 787 LCA are provided on non-market terms. Indeed, this type of financing scheme, where the State uses tax withholdings to pay a portion of the interest on the bonds, can be granted only by a government".[2240]

7.829 Although Spirit is the direct recipient of the financial contribution arising from the issuance of KDFA bonds, the European Communities argues that the KDFA bonds confer a benefit on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement. The European Communities contends that the benefit conferred by the KDFA bonds passes-through to the Boeing LCA division. The European Communities' arguments on this point are summarized at paragraphs 7.846-7.849 of this Report.

Arguments of the United States

7.830 In its response to a Panel question, the United States confirms that it "accepts that the measures at issue related to the…KDFA bonds involve a financial contribution under the SCM Agreement".[2241] The United States does not clarify whether, in its view, the financial contribution arises under Article 1.1(a)(1)(i) or (ii) or both.[2242]

7.831 The United States accepts that the KDFA bonds provide a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[2243] However, the United States argues that the benefit is provided to Spirit, not Boeing. According to the United States, the European Communities has failed to establish that the benefit arising out of the KDFA bonds issued to Spirit passes-through to Boeing. The United States' arguments on this point are summarized at paras. 7.852-7.856 of this Report.

[2237] European Communities' first written submission, para. 350.
[2238] European Communities' first written submission, para. 356.
[2239] European Communities' first written submission, para. 356.
[2240] European Communities' first written submission, para. 365.
[2241] United States' response to question 257, para. 445.
[2242] We note that the fact that the United States does not repeat its argument that a financial contribution under Article 1.1(a)(1)(ii) is limited to revenue foregone in the past, indicates that the United States at least accepts that there is a financial contribution under Article 1.1(a)(1)(i), which according to the United States, contemplates a financial contribution occurring in the future.
[2243] United States' response to question 258, para. 449.

BCI deleted, as indicated **[***]**

Evaluation by the Panel

7.832 We agree with the parties that the KDFA bonds involve a direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement.

7.833 Although the flow of funds under the KDFA bond scheme is quite convoluted, the "eligible business" remits the taxes it has withheld from its employees working on the "eligible project" to the State of Kansas. The State of Kansas then transfers the withheld taxes to pay the interest due on the KDFA bonds. In the context of this case, Spirit remits the taxes it has withheld from its employees working on the eligible project and then the Kansas state treasurer pays the funds back to Spirit, rather than the State merely waiving the requirement that Spirit pay it the withholding taxes it owes.[2244] In these circumstances, the Panel finds that there is a financial contribution to Spirit in the form of a direct transfer of funds under Article 1.1(a)(1)(i) of the SCM Agreement.[2245] Therefore, it is not necessary for us to decide whether the KDFA bond scheme can also be characterized as involving the foregoing of revenue otherwise due under Article 1.1(a)(1)(ii).

7.834 In analyzing whether Spirit received a benefit as a result of the direct transfer of funds, it is necessary to assess whether it received a financial contribution more favourable than that available on the market.[2246] The payments from the State of Kansas to Spirit, to pay for the interest due on the KDFA bonds, are equivalent to a grant, rather than to a loan for example, because Spirit is not required to repay the money or provide anything in return. In these circumstances, the conclusion that Spirit receives a benefit within the meaning of Article 1.1(b) follows readily. On the marketplace, any such transfer of funds would be accompanied by a requirement that the sum be repaid with interest. This conclusion is in accordance with that reached by the panel in *US – Upland Cotton,* where it was held that financial contributions in the form of grants confer a benefit "as they place the recipient in a better position than the recipient would otherwise have been on the marketplace".[2247]

[2244] Kan. Stat. Ann. § 74-50,136 (2004), Exhibit EC-207, section (h) provides that "the state treasurer shall credit all revenue *collected or received* from withholding upon Kansas wages paid by a taxpayer which is an eligible business with respect to an eligible project…to the special economic revitalization fund, which fund is hereby created in the custody of the state treasurer but shall not be a part of the state general fund" (emphasis added). The use of the phrase "collected or received" indicates that there is a flow of funds from the taxpayer, in this case Spirit, to the State. Section (e) of KSA §74-50,136 provides that "… revenue realized from withholding upon Kansas wages paid by the eligible business … with respect to the eligible project which is necessary to pay the interest on such obligations shall be credited to the special economic revitalization fund … and shall be *transferred by the state treasurer* to pay interest on such obligations". This indicates that there is a flow of funds back from the state to the "eligible business", namely Spirit. Footnote 568 of the European Communities' first written submission explains in further detail the flow of funds from the special economic revitalization fund to other accounts in the custody of the state, until the interest payment is eventually made to Spirit.

[2245] Even if the withheld taxes did not actually change hands, but rather the State of Kansas waived the requirement that Spirit remit withheld taxes to it, allowing Spirit to keep the taxes collected as the interest payment, this would not necessarily prevent a finding of a direct transfer of funds under Article 1.1(a)(1)(i). In *Japan – DRAMs (Korea),* the Panel held that the form of a transaction, including whether money actually changes hands, is less important than its consequences in determining whether or not a transaction constitutes a "direct transfer of funds" (para. 7.444). In *Japan – DRAMs (Korea)*, the Panel noted that debt forgiveness, where the government liberates a debtor from the obligation to repay the debt, could constitute a direct transfer of funds (para. 7.442). In a similar manner, being liberated from the need to remit withheld taxes may be a direct transfer of funds. However, in any event, the terms of the KDFA bond scheme provide for the actual flow of funds from Spirit to the State and back again.

[2246] Appellate Body Report, *Canada – Aircraft.*

[2247] Panel Report, *US – Upland Cotton,* paras. 7.1115-7.1116.

7.835 For these reasons, the Panel finds that the KDFA bonds confer a benefit and we analyze whether this benefit passes-through to Boeing in the section commencing at paragraph 7.857 of this Report.

(iv) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

Arguments of the European Communities

7.836 The European Communities' primary argument is that the KDFA bonds are de facto specific under Article 2.1(c) of the SCM Agreement. According to the European Communities, the criteria to be met to qualify as an "eligible business" with an "eligible project" are such that only Boeing Wichita (or its successor) could qualify for the bonds. This conclusion is reinforced by the fact that Spirit was the only company ever to receive the bonds.[2248]

7.837 The European Communities notes that because Spirit received 100 per cent of the bonds, it is clear that only a limited number of "certain enterprises" (i.e. one) used the bonds. Further, Spirit received a disproportionate share of the bonds within the meaning of Article 2.1(c) because Spirit does not represent 100 per cent of the economy of the State of Kansas.[2249]

7.838 In response to the United States' argument that the KDFA bonds were available to "any person doing business in Kansas" that met the eligibility criteria in the ERRA, the European Communities argues that the criteria were such that only Boeing (or its successor) could qualify for the bonds. Therefore, the conditions were not "objective criteria or conditions" within the meaning of Article 2.1(b) of the SCM Agreement.[2250] The fact that the Kansas Department of Commerce refers to the bonds as the "Boeing bonds" reinforces the conclusion that the KDFA scheme was designed with Boeing in mind and that the eligibility criteria favour certain enterprises over others.[2251]

7.839 Although the United States argues that the KDFA bonds are not specific *to Boeing* because the bonds were issued to Spirit, the European Communities contends that this is beside the point. A subsidy need not be specific to one particular enterprise to be de facto specific within the meaning of Article 2.1(c). Rather, a subsidy is de facto specific if it is used by a limited number of "certain enterprises", predominantly used by "certain enterprises" or disproportionately granted to "certain enterprises", where "certain enterprises" refers to "an enterprise or industry or group of enterprises or industries".[2252]

7.840 At the end of its second written submission regarding the specificity of the KDFA bonds, the European Communities also asserts that the KDFA bonds are *de jure* specific under Article 2.1(a) of the SCM Agreement. The European Communities argues that "given that the criteria established by the ERRA made it impossible for any entity other than Boeing (or its successor) to qualify … the legislation explicitly limited access to the KDFA bonds to certain enterprises".[2253]

[2248] European Communities' first written submission, paras. 367 and 369.
[2249] European Communities' second written submission, para. 266.
[2250] European Communities' second written submission, para. 267.
[2251] European Communities' second written submission, para. 267 and Kansas Department of Commerce, Legislative Update, Legislative Session Track for S.B. 281, Economic Revitalization and Reinvestment Act (Boeing Bonds), 10 November 2004, Exhibit EC-212.
[2252] European Communities' second written submission, paras. 264–265.
[2253] European Communities' second written submission, para. 269.

BCI deleted, as indicated **[***]**

Arguments of the United States

7.841 The United States argues that the KDFA bonds do not give rise to a specific subsidy to Boeing because the bonds were not issued to Boeing; rather, they were issued to Spirit. Further, under the ERRA, the KDFA bonds were "available to any person doing business in Kansas that met the statute's criteria".[2254]

Evaluation by the Panel

7.842 In the light of our conclusion at paragraphs 7.889-7.890 of this Report, that the benefit of the financial contribution did not "pass-through" from Spirit to Boeing, and therefore that there is no benefit to Boeing arising from the direct transfers of funds under the KDFA scheme, there is no need for the Panel to address whether the subsidy is specific.

(v) The amount of the subsidy to Boeing's LCA division

Arguments of the European Communities

7.843 The European Communities argues that the benefit arising from the KDFA bonds is approximately $6.1 million per year from 2005 until 2024, which amounts to $122 million.[2255]

7.844 The European Communities calculates this figure by noting that Spirit purchased $80 million in KDFA bonds in 2005 at an interest rate of 8.5 per cent per annum over 20 years. At this rate, the interest due on the bonds is approximately $6.8 million per year.[2256] Under the ERRA, the State of Kansas pays Spirit the interest on these bonds up to the amount of income tax withheld from Spirit's employees working on the "eligible project". The European Communities notes that in its KDFA financing application, Spirit indicated that approximately 1,500 of its employees would work on the "eligible project".[2257] Further, Spirit indicated in the same application process that the average annual gross compensation earned by employees of the former Boeing Wichita commercial airplane business was $69,979 between 2002 and 2004.[2258] In its calculations, the European Communities assumes that Spirit's employees working on the "eligible project" will have the same average wage and therefore will collectively pay approximately $6.1 million in income tax per year.[2259]

7.845 According to the European Communities' calculations, the interest due on the bonds ($6.8 million per year) exceeds the income tax withheld each year from employees working on the "eligible project" ($6.1 million per year). Therefore, under the ERRA, the State of Kansas is required to pay $6.1 million in interest each year to Spirit over a period of 20 years. This amounts to a financial contribution of $122 million between 2005 and 2024, of which $12.2 million is received in the period 2005-2006 and $109.8 million is received in the period 2007-2024.[2260]

7.846 In arguing that this amount passed-through from Spirit to Boeing's LCA division, the European Communities relies on the same Appellate Body reports in relation to pass-through as it did

[2254] United States' first written submission, para. 655.
[2255] European Communities' first written submission, para. 357.
[2256] European Communities' first written submission, para. 358.
[2257] European Communities' first written submission, para. 359 and Kansas Development Finance Authority, Financing Application, filed by Mid-Western Aircraft Finance, Inc., dated 26 May 2005, Exhibit EC-209, p. 3.
[2258] European Communities' first written submission, para. 359 and Kansas Department of Commerce, Application for Benefits as Authorized by the Economic Revitalization and Reinvestment Act, filed by Mid-Western Aircraft Systems. Inc., dated 9 May 2005, Exhibit EC-208, p. 2.
[2259] European Communities' first written submission, para. 359.
[2260] European Communities' first written submission, para. 364.

with respect to the B&O tax rate reductions and the IRBs.[2261] It also argues that pass-through occurred via the same mechanism as the IRB benefits, namely through the long-term supply agreements concluded as a term of the sale of Boeing Wichita to Spirit. The European Communities cites Professor Wachtel's analysis, that the future expected benefit of an asset is factored into its valuation upon sale, to support its case.[2262]

7.847 In response to the argument of the United States that, at the time of sale, neither the issuance of KDFA bonds nor their value was certain, the European Communities contends that the terms of the sale were finalized *after* Spirit applied for the bonds (i.e. at the time of the transaction closing rather than at the time of the signing of the Asset Purchase Agreement).[2263] In any event, at the time of signing the Asset Purchase Agreement, both parties to the transaction had a reasonable expectation that the KDFA bonds would be issued to Spirit and therefore would have factored this in to the valuation of the asset.[2264] In fact, the European Communities argues that at the time the Asset Purchase Agreement was signed, there was "little doubt" that Spirit would receive and take advantage of the bonds. The ERRA had been passed and its terms indicated that it was intended to advantage Spirit, and only Spirit. According to the European Communities, it would have been a poor business decision for Spirit not to seek the benefit of the bonds.[2265]

7.848 In relation to the amount of the future benefits, the long-term supply agreements and Spirit's business plan included enough detail for an accurate estimate of employees' future salaries and therefore, their tax obligations, which the State of Kansas uses to provide the financial contributions, to be estimated.[2266]

7.849 The European Communities contends that it has proven, based on the best publicly available information, that the benefits associated with the KDFA bonds have passed-through to Boeing's LCA division and that the United States has not rebutted this.[2267] In particular, the European Communities observes that the United States has not provided full copies of all of the documents constituting the full set of long-term supply agreements. Absent full copies of all those documents, the European Communities requests the Panel to draw the necessary inferences on this issue.[2268]

Arguments of the United States

7.850 The United States argues that at the time the price for the asset was negotiated, and even at the time the transaction closed, the amount of any possible future benefit to Spirit from KDFA bond issuances was unknown. Although the Authority had indicated its intent to issue up to $500 million in KDFA bonds to Spirit before the deal closed, the first tranche of bonds, in the amount of $80 million, was not issued until after the transaction closed.[2269]

7.851 Further, the United States contends that the amount of the benefit to accrue to Spirit as a result of the issuance of KDFA bonds could not be known with certainty in advance because the

[2261] European Communities' response to question 137.
[2262] European Communities' response to question 256, para. 456 and European Communities' first written submission, para. 363.
[2263] European Communities' second written submission, para. 258.
[2264] European Communities' second written submission, para. 257.
[2265] European Communities' second written submission, para. 259.
[2266] European Communities' second written submission, para. 260.
[2267] European Communities' second written submission, para. 262.
[2268] European Communities' comments on United States' response to question 47. European Communities' comments on United States' response to question 252, paras. 364-365; European Communities comments on United States' response to question 255.
[2269] United States' first written submission, para. 651.

interest payments to Spirit are funded by the income tax withheld from its employees.[2270] The United States argues that the level of employment over the period of the bonds cannot be predicted with any certainty.[2271] In addition, employees generally have some leeway regarding how much income tax is withheld from them.[2272] Finally, an employee's withholding tax is based on the employee's expected tax liability, which depends not only on salary, but also on number of dependents, home ownership and use of personal tax exemptions.[2273] Therefore, the amount of withheld income tax from Spirit's employees could not be known in advance.

7.852 The United States relies upon the same legal analysis regarding the need to demonstrate pass-through as it did in relation to the B&O tax rate reductions and the IRBs.[2274]

7.853 Although the United States accepts that the KDFA bonds confer a benefit, it argues that the European Communities has not demonstrated that the benefit to Spirit passed-through to Boeing's LCA division.[2275]

7.854 The United States argues that at the time a price was set for the sale, namely at the time the Asset Purchase Agreement was signed in February 2005, Spirit had not even applied for the KDFA bonds, much less received approval for them.[2276] In addition, although before the transaction closed the Authority had issued a resolution of intent to issue KDFA bonds to Spirit, this commitment was contingent upon a number of conditions being fulfilled. The Authority was not committed to issuing the bonds until after the transaction was finalized.[2277] Therefore, the future benefits from the KDFA bonds would not have been reflected in the sale price.

7.855 Further, the amount of any future benefit was uncertain because the number of future employees was unknown and employees also have some leeway regarding how much of their salary is withheld as tax.[2278] Therefore, even if there were some expectation at the time the transaction was negotiated that Spirit would receive KDFA bonds, there is no basis to determine how this may have been reflected in the sale price.

7.856 The United States relies upon the same arguments regarding the flaws in the economic analysis of pass-through presented by the European Communities as it did in relation to the IRBs. In particular, the United States notes that the price of an asset is unlikely to correspond to its expected value.[2279]

Evaluation by the Panel

7.857 As relevant background to the pass-through issues that the European Communities raises in relation to the Kansas measures, we note that prior to the sale to Spirit, Boeing Commercial Airplanes, Wichita Division ("Boeing Wichita") was a manufacturing facility owned by Boeing and located in

[2270] United States' first written submission, para. 652; United States' response to question 257, para. 447.
[2271] United States' first written submission, para. 652; United States' response to question 257, para. 447.
[2272] United States' first written submission, para. 652; United States' response to question 257, para. 448.
[2273] United States' first written submission, para. 652; United States' response to question 257, para. 448.
[2274] United States' response to question 137.
[2275] United States' response to question 258, para. 449.
[2276] United States' first written submission, para. 648.
[2277] United States' first written submission, para. 649.
[2278] United States' first written submission, para. 652.
[2279] United States' first written submission, para. 654.

Wichita, Kansas. Boeing produced parts at the facility, over a period of 70 years, for every Boeing LCA except the 717.[2280] It functioned as an internal supplier of parts and assemblies for Boeing's airplane programmes and had very few sales to third parties.[2281] On 16 June 2005, Boeing sold the facility to Spirit, at which time Spirit agreed to be Boeing's exclusive supplier for substantially all of the products and services provided by Boeing Wichita to Boeing prior to the sale. Spirit has since entered long-term supply agreements with Airbus.[2282]

7.858 In order to establish that any tax abatements or direct transfers of funds to Spirit under the IRB and KDFA bond schemes caused serious prejudice in the LCA market, the European Communities needs to demonstrate that Boeing LCA is in fact a product subsidized by these payments and tax incentives. While the European Communities refers to this as a "pass-through" analysis, we prefer to consider it as one of the steps in the causation analysis under Articles 5 and 6 of the SCM Agreement.[2283]

7.859 In essence, the European Communities' argument regarding pass-through is that at the time of sale of Boeing Wichita to Spirit, both parties to the transaction anticipated that in the future Spirit would be granted tax abatements and transfers of funds under the bond schemes. As a result, the parties factored these future benefits into the terms of the transaction, such that the beneficiary of the subsidies was Boeing, rather than Spirit. The European Communities argues that the future benefits associated with the bond issuances to Spirit may have been factored into the sale transaction through a lump-sum payment or through the terms of the supply agreements negotiated at the time of sale. In the absence of evidence to support one theory over the other, the European Communities asks the Panel to assume that the pass-through occurred via the long-term supply contracts agreed at the time of the sale. Therefore, the European Communities' pass-through claim differs from those cases in which an upstream supplier is alleged to pass-through the benefits of a subsidy to a downstream producer through adjusting the prices of the inputs as they are sold. Rather, the European Communities' case is that the pass-through occurred at the time of sale of Boeing Wichita. The European Communities does not argue that Spirit adjusts the prices for the components it sells to Boeing as it receives the subsidies in issue. Indeed, this scenario is not possible given that the prices for components sold to Boeing have been fixed in long-term supply agreements negotiated at the time of the sale of Boeing Wichita, with price adjustments possible in only a few very limited circumstances.

7.860 Before evaluating the merits of the European Communities' case, it is necessary to consider the standard of proof for pass-through that has been applied in previous cases. In *US – Softwood Lumber IV,* the Appellate Body held, albeit in the context of a countervailing duty case, that pass-through between upstream and downstream entities cannot be presumed but must be proven:

> "Where the input producers and producers of the processed products operate at arm's length, the pass-through of input subsidy benefits from the direct recipients to the indirect recipients downstream cannot simply be presumed; it must be established by the investigating authority."

7.861 However, we note that the "privatization cases" discussed by the parties in their submissions, namely *US – Countervailing Measures on Certain EC Products* and *US – Lead and Bismuth II*, indicate that in certain circumstances a rebuttable presumption regarding pass-through arises. In particular, in *US – Countervailing Measures on Certain EC Products*, the Appellate Body held that following a privatization at arm's length and for fair market value, there is a rebuttable presumption

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[2280] European Communities' first written submission, para. 286.
[2281] Prospectus, Spirit AeroSystems Holdings, Inc., 20 November 2006, Exhibit EC-165, p. 5.
[2282] Prospectus, Spirit AeroSystems Holdings, Inc., 20 November 2006, Exhibit EC-165, pp. 2 and 5.
[2283] See analysis at paras. 7.281-7.288 of this Report.

that the privatized producer paid for the benefit of prior financial contributions bestowed upon the state-owned producer and therefore that the benefit is "extinguished" upon sale. In other words, in the circumstances described in *US – Countervailing Measures on Certain EC Products*, there is a rebuttable presumption that the benefit of the subsidy *does not* pass-through to the purchaser of the state-owned entity.

7.862 In our view, unless the principle espoused in *US – Countervailing Measures on Certain EC Products* applies to the facts of the case, there is no presumption for or against pass-through. Rather, *US – Softwood Lumber IV* establishes that pass-through must be established, rather than presumed.[2284]

7.863 In considering the merits of the European Communities' case, the first step is to consider whether the theory espoused in the privatization cases applies to the facts of this case and therefore gives rise to a presumption relating to pass-through. If the theory does not apply and consequently it is necessary in accordance with *US – Softwood Lumber IV* for the European Communities to establish pass-through on the evidence, we consider whether the European Communities has successfully done so. We also consider the implications of the fact that the European Communities' case relates to pass-through that is alleged to occur prior to the receipt of any of the subsidies.

The privatization cases

7.864 To support its pass-through case in relation to the Kansas measures, the European Communities relies upon an economic analysis prepared by Professor Wachtel, which begins:

> "The economics literature on asset pricing leaves no doubt that the terms and conditions of the sale of a real capital asset, such as Boeing's commercial airplane facilities in Wichita, would reflect the benefit stream expected to accrue to the new owner from future expected subsidies. Such terms and conditions could include, for example, present and future lump-sum payments, commitments to long-term supply agreements etc." [2285]

7.865 According to the European Communities, Professor Wachtel's reasoning is similar to that which underlies the privatization cases, in particular *US – Countervailing Measures on Certain EC Products,* in that it relies on the notion that on the sale of an asset at arm's length and for fair market value the purchaser is presumed to pay for the value of the subsidy. Therefore, in considering the merits of the European Communities' case, it is necessary for us to decide whether the reasoning in the privatization cases is indeed applicable to the facts of the case before us, giving rise to a presumption relating to pass-through. In particular, it is necessary for us to consider whether the sale of Boeing Wichita at arm's length and for fair market value leads to a presumption regarding the pass-through of the benefit of the subsidies expected to be received by Spirit post-sale.

[2284] We note that the European Communities argues that the long-term supply contracts between Boeing and Spirit are not at arm's length because the prices under the contracts are lower than would ordinarily be the case. The European Communities does not seem to claim that this exempts it from any need to demonstrate pass-through. If the European Communities intends to imply this, we do not accept such a claim. The panel report in *US – Softwood Lumber IV (Article 21.5 – Canada)* (paras. 4.68-4.73) clarifies that pass-through may not need to be demonstrated where the relevant transaction occurs between *related* entities. However, the requirement to demonstrate pass-through does not depend in and of itself on whether the transaction in question is at arm's length.

[2285] Dr. Paul Wachtel, Economic Analysis: Subsidy Pass-Through and Asset Pricing Issues Relevant to Subsidies to U.S. LCA Industry, December 2006, including Dr. John Asker, On the Pass-Through of Ad Valorem Subsidies Received by Input Suppliers, 1 November 2006, attached as Annex A to Wachtel Economic Analysis, Exhibit EC-16, p. 4.

7.866 The privatization cases involved an assessment of the WTO-consistency of countervailing duties imposed or maintained by the United States on products imported from formerly state-owned producers to offset subsidies received by the producers prior to their privatization. In *US – Lead and Bismuth II,* the panel found that due to the change in ownership of the subsidized state-owned producer, leading to the creation of the privatized producers, the United States investigating authority should have examined whether the production of the privatized producers, and not the state-owned producer, was subsidized.[2286] The Appellate Body found no error in the panel's conclusion, in the specific circumstances of the case.[2287] In *US – Countervailing Measures on Certain EC Products,* where the legitimacy of a number of countervailing duties imposed by the United States against imports from the European Communities was in issue, the panel held that privatization at arm's length and for fair market value rebuts any presumption that the benefit from prior financial contributions continues to accrue to the privatized producer. In reviewing the panel's findings, in areas of the panel report in which the panel made broad statements or findings, the Appellate Body found that the panel went "too far" and that the panel "should have confined its finding to {the} specific circumstances" of the case before it.[2288] In particular, the Appellate Body emphasized that the findings of the panel applied only to the specific facts of the case, which consisted of a "benefit resulting from a prior non-recurring financial contribution bestowed on a state-owned enterprise where, following a privatization at arm's length and for fair market value, the government transfers all or substantially all the property and retained 'no controlling interest in the privatized producer'".[2289]

7.867 Therefore, if in this dispute we were to follow the theory underlying the privatization cases, namely that in the sale of an asset at arm's length and for fair market value the purchaser is presumed to pay for the value of the subsidy, this would necessarily require extending the reasoning to a completely different set of facts, in circumstances where the Appellate Body indicated that the reasoning should be used restrictively. In particular, the Panel would need to hold that the same reasoning as used in the privatization cases applies to future financial contributions bestowed on private enterprises and to the sale of enterprises in private-to-private transactions.

7.868 We consider that the privatization cases are distinguishable from the facts before us and we do not consider it appropriate to extend the theory underlying the privatization cases to the facts of this case. Whereas the upshot of the privatization cases was that the benefit of the subsidies received prior to sale were presumed *not* to pass-through to the privatized entity, the result of extending the theory underlying the privatization cases to the facts of this dispute would be a presumption *in favour* of pass-through to the seller of the benefit of subsidies to be received in the future. In creating a presumption against pass-through, the privatization cases placed the burden on the complaining party to establish pass-through. If we were to create a presumption in favour of pass-through of future subsidies, this would effectively shift the burden of proof by placing a burden on the respondent to rebut or to disprove the presumed pass-through. In our view, this was not an intended consequence of the privatization cases.

7.869 We also consider the privatization cases to be distinguishable from the facts before us because the nature of a privatization is very different from a private-to-private sale. As the panel noted in *US – Countervailing Measures on Certain EC Products,* "privatization is a very particular and complex change in ownership. It involves a fundamental transformation of a government-owned and controlled entity into a privately-owned, market-oriented company".[2290] Whereas a privatization results in a "fundamental transformation" of the entity in issue, in an ordinary private-to-private

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[2286] Panel Report, *US – Lead and Bismuth II.*

[2287] Appellate Body Report, *US – Lead and Bismuth II.*

[2288] Appellate Body Report, *US – Countervailing Measures on Certain EC Products,* paras. 116-118.

[2289] Appellate Body Report, *US – Countervailing Measures on Certain EC Products,* para. 117; Panel Report, *US – Countervailing Measures on Certain EC Products,* para. 7.62.

[2290] Panel Report, *US – Countervailing Measures on Certain EC Products,* para. 7.60.

transaction the nature of the legal entity does not necessarily change in the course of the sale. Consequently, while the change in the nature of the entity that was privatized may provide some grounds for finding that the entity's production is no longer subsidized post-sale, the same reasoning is not applicable to private-to-private sales.

7.870 Further, in the Panel's view a major loophole in the SCM Agreement would result if the reasoning underlying the privatization cases were extended to private-to-private sales. The European Communities' case is that the sale of Boeing Wichita caused the benefit of the subsidies to pass-through to the Boeing LCA division. However, in the privatization cases (in which the seller no longer acted as a producer in the market), the conclusion that the purchaser paid for the value of the subsidy was found to "extinguish" the subsidy. If the Panel in this dispute were to extend the principle in the privatization cases to private-to-private sales, daily trading in the shares of publicly traded corporations could not logically be excluded from the changes of ownership to which the "extinction" principles would apply. Therefore, a subsidized public trading corporation would be placed outside the disciplines of the SCM Agreement, because any sale of a share in the company on arm's length terms and for fair market value would "extinguish" the subsidies . As trading in shares occurs on a daily basis in relation to many publicly traded corporations, a subsidy provided to such a company would be "extinguished" soon after its provision. Therefore, a government could provide such companies with subsidies, confident in the knowledge that they would quickly be "extinguished" and therefore would be immune from challenge under the SCM Agreement. Therefore, in our view, applying the principle underlying the privatization cases to a wider context than the specific one endorsed by the Appellate Body could significantly undermine the disciplines of the SCM Agreement.

7.871 Therefore, we distinguish the facts that arose in the two privatization cases from the facts before us and we do not consider it appropriate to extend the reasoning underlying those cases to the facts of this case. As a result, we conclude that there is no presumption relating to pass-through. Rather, as indicated in *US – Softwood Lumber IV*, pass-through cannot be presumed but must be established on the evidence.

Evidence to support the European Communities' case

7.872 Apart from the economic theory espoused by Professor Wachtel and the theory underlying the privatization cases, the latter of which we have concluded is not applicable to the facts before us, the European Communities does not submit any evidence to support its contention that the expected subsidies were factored into the negotiation of the sale of Boeing Wichita. The European Communities explains that it lacks any other evidence, aside from Professor Wachtel's statement, because the United States has refused to supply it with un-redacted copies of the long-term supply agreements. However, according to the European Communities, even in the absence of any such evidence, it has made a prima facie case.

7.873 Although the European Communities does not cite any evidence to demonstrate that the economic theory upon which it relies applied as predicted in the context of the sale of Boeing Wichita, there are a number of documents on the record which were created at or around the time of the sale. These documents include the Asset Purchase Agreement between Boeing and Spirit[2291], the Spirit Prospectus[2292], a Form 8-K lodged by Boeing with the United States Securities and Exchange Commission[2293] and the supply agreements entitled "the Special Business Provisions Agreement" and

[2291] Asset Purchase Agreement Between The Boeing Company and Mid-Western Aircraft Systems, Inc., 22 February 2005, Exhibit EC-166.
[2292] Prospectus, Spirit AeroSystems Holdings, Inc., 20 November 2006, Exhibit EC-165.
[2293] Boeing 8-K, 16 June 2005, Exhibit EC-158.

"the General Terms Agreement".[2294] A review of the documents indicates that they do not contain any evidence in support of the European Communities' case, despite being created at or around the time of the sale of Boeing Wichita.

7.874 In particular, we note that the form (Form 8-K) lodged with the United States Securities and Exchange Commission by the Boeing Company provides:

> "On June 16, 2005, The Boeing Company ("the Company") completed the sale of its Commercial Airplanes operations in Kansas…Transaction consideration to the Company includes approximately $900 million cash, transfer of certain liabilities, and long-term supply agreements that provide the Company with ongoing cost savings."[2295]

7.875 Therefore, this exhibit confirms the European Communities' submission that the long-term supply agreements, through which Boeing obtains costs savings, were a part of the consideration for the sale of Boeing Wichita. However, this does not prove that the cost savings arising under the supply agreements were due to Spirit passing-through the benefit of the expected subsidies to Boeing's LCA division. In the Spirit Prospectus repeated reference is made to the "comprehensive cost reductions" Spirit achieved through the Boeing acquisition, for example through reducing the workforce by 15 per cent and through entering into new labour contracts.[2296] Therefore, the cost savings Boeing realizes through contracting with Spirit, rather than manufacturing its own components, as it did prior to the sale, may be a reflection of the efficiency improvements made by Spirit, rather than an indication that the value of expected subsidies was passed-through to Boeing's LCA division.[2297] Further, given that the long-term supply agreements were a part of the consideration for the transaction any preferential pricing may simply have been negotiated in exchange for a decreased amount of cash to be paid for the Boeing Wichita facility. Therefore, although the form lodged with the Securities and Exchange Commission confirms the European Communities' case that long-term supply agreements were a part of the consideration for the sale of Boeing Wichita, this is not evidence that the expected subsidies were passed-through to Boeing's LCA division at the time of sale.

7.876 The Panel notes that a provision in the General Terms Agreement suggests that the prices charged under the supply agreements are not discounted, as asserted by the European Communities, but that the components are sold at their market value:

> "Boeing and {Spirit} agree that the prices have been negotiated on an arms-length basis and represent the fair market value of the Products as of the date hereof." [2298]

[2294] The long-term supply agreements negotiated as consideration for the sale are defined in the Asset Purchase Agreement (Asset Purchase Agreement Between The Boeing Company and Mid-Western Aircraft Systems, Inc., 22 February 2005, Exhibit EC-166) as the "BCA Supply Agreement", which includes the Special Business Provisions (Sustaining), the General Terms Agreement (Sustaining), the Special Business Provisions (787), the General Terms Agreement (787), the Special Business Provisions (Spares), the Special Business Provisions (Tech Support) and the Special Business Provisions (Repair Support). The United States supplies the Special Business Provisions Between The Boeing Company and Spirit Aerosystems, Incorporated; General Terms Agreement Between The Boeing Company and Spirit Aerosystems, Incorporated Q 47, Exhibit US-1213.

[2295] Boeing 8-K, 16 June 2005, Exhibit EC-158.

[2296] Prospectus, Spirit AeroSystems Holdings, Inc., 20 November 2006, see e.g. Exhibit EC-165, p. 3.

[2297] Further, post-sale the Wichita facility began supplying Airbus as well as Boeing. Through increasing its customer base, economies of scale and therefore cost reductions may have been realized.

[2298] Special Business Provisions Between The Boeing Company and Spirit Aerosystems, Incorporated; General Terms Agreement Between The Boeing Company and Spirit Aerosystems, Incorporated Q 47, Exhibit US-1213, s31, p. 39.

BCI deleted, as indicated **[***]**

However, this provision does not necessarily disprove the European Communities' argument, as it may have been inserted into the agreements for taxation purposes.

7.877 The Spirit Prospectus and the Special Business Provisions Agreement[2299] provide some insight into the pricing arrangements in the long-term supply agreements. The supply arrangements consist of requirements contracts, under which Boeing is obligated to purchase all of its requirements for specified components from Spirit. In relation to components for the 737, 747, 767 and 777, the Special Business Provisions Agreement provides for a quantity-based price adjustment formula, such that average per unit prices are higher at low volumes and lower at high volumes. In relation to the supply of components for the 787, prices decrease as cumulative volume levels are met over the life of the programme.

7.878 It is not possible to draw a conclusion regarding pass-through from this pricing structure. However, the Panel notes that the expected subsidies to Spirit are not *ad valorem* subsidies, but rather are fixed sums expected to benefit Spirit each year. For an *ad valorem* subsidy, 100 per cent pass-through can be achieved if the price per unit is discounted to reflect the benefit of the subsidy received per unit. In the case of a fixed sum to be passed-through via the sale of components, as the volume of components ordered decreases, the amount of the fixed sum to be passed-through *per component* increases. The European Communities' case seems to be that even if Boeing's component requirements are very low, 100 per cent of the expected benefit from the subsidies will pass-through to Boeing's LCA division. Although unlikely, if Boeing ordered only one component in a particular year, the European Communities' case is that the preferential price on that component has been fixed such that full pass-through will occur, where each year the European Communities calculates that the benefit from the subsidies significantly exceeds $6 million.[2300] The latter proposition seems difficult to accept, although we acknowledge that even if in a particular year full pass-through of the benefit received in that year does not occur, it may eventually do so in the long-run over the term of the supply agreement. Having made these observations, we acknowledge that we are not able to draw a conclusion regarding pass-through from the pricing structure in the agreements.

7.879 We note that under the supply agreements, Boeing must purchase all of its requirements for specified components from Spirit but there is no minimum order amount.[2301] Therefore, under the agreements, it is possible that Boeing may place no orders at all. In the light of this, it is not clear that we can confidently conclude that pass-through will be greater than zero.

7.880 The Panel also observes that the Special Business Provisions Agreement specifically provides for the pass-through of a certain percentage of the cost savings realized by Spirit through purchasing directly from a Boeing subcontractor:

> "Seller {i.e. Spirit} to notify Boeing of any cost reductions resulting from use of Third Party Price Contracts. Seller shall apply **[***]** of the savings achieved through

[2299] Special Business Provisions Between The Boeing Company and Spirit Aerosystems, Incorporated; General Terms Agreement Between The Boeing Company and Spirit Aerosystems, Incorporated Q 47, Exhibit US-1213.

[2300] The European Communities calculates that the expected direct transfer of funds to Spirit to arise under the KDFA bond programme is $6.1 million per year, while the tax abatements expected to accrue to Spirit under the IRB programme through 2006 is $1.1 million per year (see Estimates of Tax Benefits from Wichita IRBs, Exhibit EC-23).

[2301] Special Business Provisions Between The Boeing Company and Spirit Aerosystems, Incorporated; General Terms Agreement Between The Boeing Company and Spirit Aerosystems, Incorporated Q 47, Exhibit US-1213, p. 85.

> the use of these Boeing Third Party Price Contracts towards price reductions on the applicable Boeing Products." [2302]

Of course, the lack of reference to pass-through of the subsidies does not disprove the European Communities' theory, but we note the European Communities does not explain why pass-through of such cost savings was explicitly mentioned in the agreement but pass-through of the benefits of the expected subsidies was not.

7.881 In conclusion, an analysis of the agreements on the record created at the time of sale does not reveal evidence in support of the European Communities' pass-through submissions. The implications of accepting the European Communities' pass-through case would be that every time a company is sold for fair market value in circumstances where the parties to the sale expected a subsidy to be received in the future, the conditions for a finding of pass-through of the expected subsidy will have been met. This would be the case even in the absence of any evidence that the parties factored the expected subsidy into the consideration for the transaction. All that a disputing party before a WTO panel would be required to do to prove pass-through would be to cite the economic theory advocated by Professor Wachtel. We cannot accept that this should be the case.

7.882 While it is possible that the European Communities' position is correct, the Panel has no evidence before it to convince it of this. The European Communities was unable to adduce evidence even to narrow its position regarding whether pass-through occurred via the long-term supply agreements negotiated at the time of sale or via the cash payment made at the time of sale. Given that we have found that there is no presumption in favour of pass-through in the circumstances of this case, and therefore that at least some evidence is required to demonstrate that pass-through has occurred, we cannot accept the European Communities' claim.

7.883 With respect to the European Communities' argument that the United States has not provided it with the relevant information and documents required to demonstrate pass-through, we recall our analysis of the documents on the record created at or around the time of the sale and provided by the United States in redacted form.[2303] Our review of these documents indicates that they contain no evidence that pass-through occurred in the manner advanced by the European Communities. Given the nature of the documents and the time at which they were created, in our view we can accord some significance to this. Consequently, and also in the light of the concerns expressed in the following subsection regarding the fact that pass-through is alleged to occur prior to the receipt of the subsidies in issue, we decline to draw the inference requested by the European Communities.

> The relevance of the fact that "pass-through" is alleged to occur prior to the receipt of any of the subsidies

7.884 The European Communities' pass-through case is different to prior cases in which pass-through has been proven, or in which the benefit of a subsidy has been "extinguished" upon the sale of a legal entity, because the European Communities' case relates to pass-through of subsidies that, at the time of sale, were all expected to be received in the *future*.

7.885 An obvious difficulty with accepting the European Communities' case is that at the time of the sale, which is the time at which the pass-through is alleged to have occurred, there was no guarantee that Spirit would actually apply for and receive all the subsidies that are the subject of the

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[2302] See Special Business Provisions Between The Boeing Company and Spirit Aerosystems, Incorporated; General Terms Agreement Between The Boeing Company and Spirit Aerosystems, Incorporated Q 47, Exhibit US- 1213, p. 45 and Prospectus, Spirit AeroSystems Holdings, Inc., 20 November 2006, Exhibit EC-165, p. 86.

[2303] See European Communities' comments on United States' response to question 252, para. 364.

European Communities' predictions.[2304] If the Panel were to accept the European Communities' case, it would be concluding that pass-through of certain "subsidies" occurred at a time when the subsidies had not been and may not ever have been granted. Although it is possible that the parties to the sale adjusted the terms and conditions of the sale of Boeing Wichita in the anticipation of Spirit receiving certain subsidies in the future, in the Panel's view it is incorrect to classify this as "pass-through" of a subsidy in circumstances where the anticipated tax abatements or direct transfers of funds may never actually be received by Spirit.

7.886 If we were to accept that subsidies to be received in the future may "pass-through" at the time of sale of a legal entity, this line of reasoning may be extended to the facts of privatization cases, such that subsidies could be "extinguished" upon the sale of the legal entity, either prior to or after the receipt of the subsidies in issue. In our view, to conclude that a subsidy that may never actually be received is "extinguished" is problematic. Even if the financial contribution is eventually granted, it will not be possible to find that it gives rise to a subsidy because the benefit will have already been "extinguished", prior to the financial contribution ever having been received. This gives rise to certain logical problems, including the fact that a panel would be making findings regarding the extinguishment of a "subsidy", even though the "subsidy" never actually exists.

7.887 The United States highlights that while the European Communities estimated that Spirit would apply for and receive IRBs to the value of $222 million in 2007, in fact Spirit did not apply for any IRBs in that year.[2305] Although the European Communities argues that Spirit will make up for this by applying for more IRBs in later years as the production of the Boeing 787 "ramps up", there is no guarantee this will occur. This highlights the speculative nature of the finding that the European Communities is requesting the Panel to make.

7.888 The consequence of accepting the European Communities' case is that in the future, if Spirit actually receives the financial contributions associated with the IRB and the KDFA bonds, Spirit will not be able to have a countervailing duty imposed against it, because we will have concluded that Spirit is not in fact the recipient of the benefit of the subsidy. Therefore, accepting the European Communities' case may establish a new defence in countervailing duty cases. In particular, any entity that is subject to an ownership change prior to receiving a particular subsidy may argue that it should be immune from any countervailing duties because the benefit of the subsidy "passed-through" to the seller at the time of the sale. In the absence of evidence that pass-through of this nature actually occurred, we are not convinced that parties should be entitled to avail themselves of such a defence. Therefore we are not prepared to lay the foundations for this line of argument by finding in favour of the European Communities in this case.

7.889 For these reasons, the Panel finds that the European Communities has failed to demonstrate that the benefit of subsidies to be received by Spirit passed-through to Boeing at the time of sale of Boeing Wichita. Therefore, the Panel finds that the amount of the subsidy to Boeing's LCA Division arising from the issuance of the KDFA bonds is $0.

(vi) Conclusion

7.890 **For these reasons, the Panel finds that the direct transfer of funds arising following the issuance of KDFA bonds is a financial contribution within the meaning of Article 1 of the SCM Agreement, but that the European Communities has not demonstrated that the benefit of the financial contribution passed-through to Boeing. Therefore, the Panel finds that the European Communities has not demonstrated that the measure gives rise to a subsidy to Boeing.**

[2304] At the time of the sale, Spirit had not received any of the subsidies in issue. At the time of the written submissions, Spirit had received some of the subsidies that were anticipated at the time of sale.

[2305] United States' response to question 253, para. 431.

BCI deleted, as indicated **[***]**

4. State of Illinois and municipalities therein

(a) Introduction

7.891 The European Communities argues that each of the four measures at issue is a subsidy within the meaning of Article 1 of the SCM Agreement, and is specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that the total amount of the four subsidies to Boeing's LCA division is approximately $25 million over the period 2002-2021.

7.892 The United States accepts that these measures are subsidies within the meaning of Article 1 of the SCM Agreement, but argues that three of the four subsidies are not specific within the meaning of Article 2 of the SCM Agreement. In addition, the United States asserts that any amounts that Boeing receives after 2006 are "speculative" and fall outside of the Panel's terms of reference, and asserts that the total value of the four subsidies to Boeing's LCA division is **[***]** million over the period 2002-2006.

(b) The measures at issue

7.893 The European Communities' claim concerns four separate incentives that the State of Illinois and municipalities therein (i.e. Cook County and the City of Chicago[2306]) provided to Boeing in consideration for Boeing's decision to relocate its corporate headquarters from Seattle to Chicago in 2001. The first three incentives are derived from the *Corporate Headquarters Relocation Act*[2307] ("CHRA"). The CHRA was signed into law on 1 August 2001, approximately one month before Boeing relocated its headquarters to Chicago. The CHRA authorized the granting of certain incentives to an "eligible business" undertaking a "qualifying project". The CHRA incentives included the following:

(a) the reimbursement of up to 50 per cent of the relocation expenses incurred by an "eligible business"[2308];

(b) the granting of 15-year Economic Development for a Growing Economy ("EDGE") tax credits to an "eligible business", instead of the normal 10-year tax credit available under the EDGE Tax Credit Act[2309]; and

(c) the abatement or refund of a portion of property taxes of an "eligible business" for up to 20 years.[2310]

7.894 Under the CHRA, an "eligible business" is defined as a business that:

(a) is engaged in interstate or intrastate commerce;

(b) maintains its corporate headquarters in a state other than Illinois as of 1 August 2001;

(c) had annual worldwide revenues of at least $25 billion for the year immediately preceding its application for the benefits authorized by the CHRA; and

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[2306] The City of Chicago is located within Cook County.
[2307] Corporate Headquarters Relocation Act, 2001 Ill. Pub. Act 92-0207, Exhibit EC-216.
[2308] 20 ILCS § 611/20, Exhibit EC-223.
[2309] 35 ILCS § 10/5-45(b), Exhibit EC-224.
[2310] 35 ILCS § 200/18-165(a)(8), Exhibit EC-225.

> (d) is prepared to commit contractually to relocating its corporate headquarters to the State of Illinois in consideration of the benefits authorized by this Act.[2311]

7.895 The CHRA defines a "qualifying project" to mean:

> "... the relocation of the corporate headquarters of an eligible business from a location outside of Illinois to a location within Illinois, whether to an existing structure or otherwise. When the relocation involves an initial interim facility within Illinois and a subsequent further relocation within 5 years after the effective date of this Act to a permanent facility also within Illinois, all those activities collectively constitute a 'qualifying project' under this Act."[2312]

7.896 To qualify as an "eligible business" with a "qualifying project", a company must meet all of these requirements. In addition, the CHRA provides that in order to obtain the reimbursement for relocation costs, an "eligible business" had to propose a "qualifying project" by 1 July 2004.[2313] The CHRA likewise provides that, to receive a 15-year EDGE tax credit, an "eligible business" had to propose a "qualifying project" no later than 1 July 2004.[2314] The CHRA granted both the City of Chicago and Cook County, as taxing districts, the authority to abate or refund certain property taxes, so long as such property tax abatements/refunds were approved by 1 August 2006.[2315]

7.897 The CHRA indicates that its purpose is to encourage the relocation of the international headquarters of large, multinational corporations to a location within Illinois "through the use of incentives ... that would otherwise not be available through existing incentives programs".[2316]

7.898 Boeing has made use of all of these incentives provided under the CHRA.

7.899 First, Boeing and the State of Illinois entered into a "Corporate Headquarters Relocation Act Master Agreement" in March 2002, under which the State of Illinois agreed to reimburse Boeing for a portion of its relocation expenses.[2317] The reimbursement for corporate relocation costs is provided through one or more grants issued annually for (i) a period of up to 10 years or (ii) until 50 per cent of the expenses of an "eligible business" have been reimbursed, whichever comes first.[2318] The amount of the annual grant, however, cannot exceed 50 per cent of the total amount of income taxes withheld by an "eligible business" during the preceding calendar year from its employees at the headquarters.[2319] These reimbursements are issued from the Corporate Headquarters Relocation Assistance Fund. This Fund is generated from the personal income taxes paid by the employees of an "eligible business". In particular, 50 per cent of the aggregate amount of income taxes withheld from the employees of an "eligible business" at the corporate headquarters during the preceding calendar year is transferred to the Fund.[2320]

[2311] 20 ILL. COMP. STAT. § 611/10, Exhibit EC-226.
[2312] 20 ILL. COMP. STAT. § 611/10, Exhibit EC-226.
[2313] 20 ILCS § 611/20(a), Exhibit EC-223.
[2314] 35 ILCS § 10/5-45(b), Exhibit EC-224; 20 ILCS § 611/20(a), Exhibit EC-223.
[2315] See 35 ILCS § 200/18-165(a)(8), Exhibit EC-225.
[2316] Corporate Headquarters Relocation Act, 2001 Ill. Pub. Act 92-0207, Exhibit EC-216.
[2317] See Corporate Headquarters Relocation Act Master Agreement between The Illinois Department of Commerce and Community Affairs and The Boeing Company, 27 March 2002, Exhibit EC-228.
[2318] 20 ILCS § 611/20(b)(6), Exhibit EC-223.
[2319] 20 ILCS § 611/20(b)(7), Exhibit EC-223.
[2320] 20 ILCS § 611/30, Exhibit EC-232.

7.900 Second, Boeing and the State of Illinois entered into an EDGE tax agreement on 27 March 2002.[2321] The tax credit that Boeing received lowered the company's state income tax liability by the amount of the credit. Pursuant to the EDGE Agreement, the EDGE credit is equal to 60 per cent of the state payroll taxes of Boeing's employees.[2322]

7.901 Third, Boeing applied for and received the property tax abatements provided for in the CHRA. These tax abatements entered into force upon the City and County passing two separate ordinances[2323], and completing two associated agreements with Boeing.[2324] Pursuant to the tax reimbursement agreement between the City of Chicago and Boeing, and the accompanying approval ordinance passed by the City Council, the City of Chicago has been providing Boeing with the abatement of property taxes since 2002.[2325] In particular, the City of Chicago committed to provide Boeing, on an annual basis from 2002 through 2021 (or until the Boeing lease expires, whichever comes first)[2326], reimbursements for the applicable shares of the Boeing General Real Estate Taxes[2327] paid to the City of Chicago, the School Finance Authority, the Board of Education, and the City's Library Fund.[2328] Pursuant to the tax reimbursement agreement between Cook County and Boeing, and the accompanying approval ordinance passed by Cook County's Board of Commissioners, Cook County has also provided Boeing with property tax refunds since 2002.[2329] In particular, Cook County committed to reimburse Boeing for the Boeing General Real Estate Taxes paid to the County and the Forest Preserve District on its corporate headquarters building for 20 years – that is, from 2002 until 2021, or until the last year of the Boeing lease, whichever comes first.[2330]

7.902 In addition to the three incentives provided under the CHRA, the City of Chicago also agreed to pay $1 million to retire the lease of the previous tenant of Boeing's new headquarters building. Chicago made the payment in order to enable Boeing to move into its office space by September 2001. Immediately after the City agreed to the $1 million payment, on 10 May 2001, the Landlord and Boeing executed a 15-year lease agreement (the "Boeing Lease").[2331] The City made the actual payment on 15 January 2003 pursuant to the Lease Termination Compensation Agreement between 100 North Riverside, LLC, and the City of Chicago. This Agreement notes that the City

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[2321] EDGE Tax Credit Agreement between the State of Illinois and The Boeing Company, 27 March 2002, Exhibit EC-237.

[2322] EDGE Tax Credit Agreement between the State of Illinois and The Boeing Company, 27 March 2002, Exhibit EC-237, p. 5, § 2.B.

[2323] An Ordinance of the City of Chicago, Illinois Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company, Exhibit EC-244; An Ordinance of the County of Cook, Illinois Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company, Exhibit EC-245.

[2324] Tax Reimbursement Payment Agreement between the County of Cook and The Boeing Company, 1 November 2001, Exhibit EC-246; Tax Reimbursement Payment Agreement by and between the City of Chicago and The Boeing Company, 1 November 2001, Exhibit EC-247.

[2325] Tax Reimbursement Payment Agreement by and between the City of Chicago and The Boeing Company, 1 November 2001, Exhibit EC-247, pp. 2-3.

[2326] Tax Reimbursement Payment Agreement by and between the City of Chicago and The Boeing Company, 1 November 2001, Exhibit EC-247, pp. 5-6.

[2327] Boeing General Real Estate Taxes are defined as the general *ad valorem* real estate taxes Boeing is obligated to pay with respect to the two private tax parcels applicable to Boeing's Property and Building in Chicago. Tax Reimbursement Payment Agreement by and between the City of Chicago and The Boeing Company, 1 November 2001, Exhibit EC-247, p. 4.

[2328] Tax Reimbursement Payment Agreement by and between the City of Chicago and The Boeing Company, 1 November 2001, Exhibit EC-247, p. 2-3.

[2329] See Tax Reimbursement Payment Agreement between the County of Cook and The Boeing Company, 1 November 2001, Exhibit EC-246.

[2330] Tax Reimbursement Payment Agreement between the County of Cook and The Boeing Company, 1 November 2001, Exhibit EC-246, pp. 8-9, § 4.2.

[2331] Lease Termination Compensation Agreement between 100 North Riverside, LLC and the City of Chicago, 15 January 2003, Exhibit EC-217, p. 2.

made the payment in order to "induce the Landlord to consent to the termination of Morton's {the previous tenant's} long-term, above market lease".[2332] This served to "make floors 25-28 available to Boeing and finalize the Boeing relocation".[2333]

(c) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

(i) Arguments of the European Communities

7.903 The European Communities provides a separate financial contribution analysis for each of these four measures. First, the European Communities argues that the reimbursements to Boeing for its relocation expenses constitute a direct transfers of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.[2334] Alternatively, the European Communities argues that "by using income tax withholdings to finance the grant, the State of Illinois is also foregoing tax revenue that would otherwise be available to it within the meaning of Article 1.1(a)(1)(ii)".[2335] Second, the European Communities argues that through the 15-year EDGE tax credits, the State of Illinois is required to forego tax revenue that it otherwise would have collected from Boeing, as Boeing's tax liability is reduced by the amount of the credit. According to the European Communities, such government revenue foregone or not collected constitutes a financial contribution within the meaning of Article 1.1(a)(1)(ii).[2336] Third, the European Communities argues that the combined contributions of the City of Chicago and Cook County pursuant to the tax reimbursement agreements and ordinances can be considered either as a direct transfer of funds within the meaning of Article 1.1(a)(1)(i), or as the foregoing of government revenue that is otherwise due pursuant to Article 1.1(a)(1)(ii).[2337] Fourth, the European Communities argues that the lease retirement payment from the City of Chicago to Boeing's landlord constitutes a direct transfer of funds within the meaning of Article 1.1(a)(1)(i).[2338]

7.904 The European Communities also provides a separate benefit analysis for each of these four measures. However, the arguments that it advances for each of the four measures are very similar. With respect to the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues in respect of each of the four measures that: (i) the financial contributions provide Boeing's LCA division with "advantages on non-market terms"[2339]; (ii) Boeing "is not required to pay anything in return" for these financial contributions[2340]; (iii) advantages conferred on Boeing's LCA division by these financial contributions "result in a reduction in Boeing's overhead costs"[2341]; (iv) these types of financial contributions are not available on the market because by definition they can be granted "only by a government"[2342]; and (v) a portion of these reimbursements "relate to Boeing's production of commercial aircraft".[2343]

7.905 In its second written submission, the European Communities notes that the United States does not dispute that each of the four measures constitutes a financial contribution within the meaning of

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[2332] Lease Termination Compensation Agreement between 100 North Riverside, LLC and the City of Chicago, 15 January 2003, Exhibit EC-217, p. 2.
[2333] Lease Termination Compensation Agreement between 100 North Riverside, LLC and the City of Chicago, 15 January 2003, Exhibit EC-217, p. 2.
[2334] European Communities' first written submission, para. 381.
[2335] European Communities' first written submission, para. 382.
[2336] European Communities' first written submission, para. 402.
[2337] European Communities' first written submission, para. 427.
[2338] European Communities' first written submission, para. 448.
[2339] European Communities' first written submission, paras. 386, 407, 432 and 451.
[2340] European Communities' first written submission, paras. 387, 408, 433 and 452.
[2341] European Communities' first written submission, paras. 388, 409, 434 and 453.
[2342] European Communities' first written submission, paras. 388, 409, 434 and 453.
[2343] European Communities' first written submission, paras. 389, 410, 435 and 454.

Article 1.1(a)(1)(i) or (ii) of the SCM Agreement[2344], and that the United States does not dispute that each of the financial contributions confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[2345]

(ii) Arguments of the United States

7.906 In its first written submission, the United States argues, under the sub-heading "Financial Contribution/Benefit", that the European Communities has overestimated the value of the subsidies provided to Boeing.[2346] However, the United States does not dispute that each of the four measures provides a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement, and the United States does not dispute that each of these four financial contributions confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. Furthermore, in its responses to questions 13[2347], 14[2348], and 368[2349] from the Panel, the United States agrees that each of the four measures challenged by the European Communities is a subsidy within the meaning of Article 1 of the SCM Agreement.

(iii) Evaluation by the Panel

7.907 In this case, the European Communities provides evidence and legal argument as to why each of the four challenged measures constitutes a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement, and why each financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. The United States does not contest that each of the four challenged measures constitutes a subsidy within the meaning of Article 1. Having reviewed the evidence presented by the European Communities, the Panel sees nothing that would support a different conclusion.

7.908 Accordingly, the Panel finds that each of the four challenged measures constitutes a subsidy within the meaning of Article 1 of the SCM Agreement.

(d) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

(i) Arguments of the European Communities

7.909 The European Communities argues that each of the four subsidies is specific within the meaning of Article 2 of the SCM Agreement.

[2344] European Communities' second written submission, paras. 272, 286, 297, and 308.

[2345] European Communities' second written submission, paras. 277, 290, 302, and 309.

[2346] United States' first written submission, paras. 662-663 (concerning the amount of the relocation expenses reimbursed to Boeing), 669 (concerning the amount of the EDGE tax credit claimed by Boeing), and 679 (concerning the amount of the property tax abatements claimed by Boeing). The United States does not dispute the European Communities' estimate of the amount of the subsidy to Boeing's LCA Division arising from the lease termination payment. United States' first written submission, para. 682.

[2347] United States' response to question 13, para. 29 ("The retirement of the lease by the City of Chicago is a subsidy that is specific within the meaning of Articles 1 and 2 of the SCM Agreement.")

[2348] United States' response to question 14, paras. 34-35 ("The reimbursement of certain relocation expenses by the State of Illinois pursuant to the Corporate Headquarters Relocation Act ("CHRA") constitutes a subsidy under Article 1 of the SCM Agreement. ... The property tax abatement provided by the City of Chicago to Boeing can be considered a subsidy within the meaning of Article 1 of the SCM Agreement ...").

[2349] In its response to question 368, the United States confirmed that with respect to the reimbursement of corporate relocation expenses, the EDGE tax credit, and the property tax abatements, the arguments in the United States' first written submission regarding the "speculative nature" of these tax credits, abatements, and reimbursements are aimed at challenging the European Communities' "quantification" of the alleged subsidies, rather than the "existence of the alleged subsidies under Article 1.1".

7.910 With respect to the three subsidies provided to Boeing under the CHRA, the European Communities asserts that: (i) Boeing is the only company that has met the definition of an "eligible business" under the CHRA, and therefore Boeing is the only company that has ever received these subsidies[2350]; (ii) as a result of the expiry of the statutory time limits for applying for these subsidies, no company other than Boeing will ever receive these subsidies[2351]; and (iii) numerous government publications, statements by members of the Illinois General Assembly, press reports, and other sources demonstrate that the CHRA was tailored specifically for Boeing.[2352] The European Communities therefore argues that the CHRA subsidies, i.e. (i) the reimbursement of relocation expenses (ii) the 15-year EDGE tax credits and (iii) the abatement or refund of property taxes, are all de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.[2353] In addition, the European Communities argues that the property tax abatements are specific within the meaning of Article 2.1(a) of the SCM Agreement because "the two ordinances at issue here are specific only to Boeing, as are the tax agreements that Boeing entered into with the City and County".[2354]

7.911 The European Communities argues that the lease retirement grant is *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement, because the Lease Termination Agreement, by its terms, applies only to Boeing. The European Communities notes that this payment was purely a one-time grant from the City of Chicago.[2355] In the alternative, the European Communities argues that the subsidy is nonetheless de facto specific under Article 2.1(c) of the SCM Agreement, because it benefits only one company, i.e. Boeing.[2356]

(ii) Arguments of the United States

7.912 The United States argues that the three subsidies provided to Boeing under the CHRA are not specific within the meaning of Article 2 of the SCM Agreement.

7.913 First, the United States argues that the relocation expense reimbursements are not specific because: (i) the CHRA is not *de jure* specific under Article 2.1(a) of the SCM Agreement because "it is not explicitly limited to Boeing or similar enterprises"; (ii) the CHRA is non-specific under Article 2.1(b) of the SCM Agreement because it "contains objective criteria governing the eligibility for and the amount of costs that may be reimbursed"; and (iii) although Boeing was the only company that ever received relocation expense reimbursements pursuant to the CHRA, this does not indicate de facto specificity under Article 2.1(c) of the SCM Agreement because of "the size of the neutrally defined benefit group and the short length of time for this program".[2357]

7.914 Second, the United States argues that the 15-year EDGE tax credits provided to Boeing pursuant to CHRA are not specific because: (i) the EDGE Tax Credit Act "is not explicitly limited to certain enterprises under Article 2.1(a)"; (ii) the EDGE Tax Credit Act "contains objective criteria that govern the eligibility for, and the amounts of, the tax credits" under Article 2.1(b); (iii) EDGE tax credits are "broadly available to a variety of companies in Illinois that meet the {EDGE Tax Credit} Act's requirements" and therefore are not de facto specific under Article 2.1(c); and (iv) only

[2350] European Communities' first written submission, paras. 390-391, 411, 415 and 441.
[2351] European Communities' first written submission, paras. 391, 412 and 443.
[2352] European Communities' first written submission, paras. 392-395, 412-414 and 442-443.
[2353] European Communities' first written submission, paras. 390, 411 and 442.
[2354] European Communities' first written submission, para. 436.
[2355] European Communities' first written submission, para. 455.
[2356] European Communities' first written submission, para. 456.
[2357] United States' first written submission, para. 664.

during the five-year extension provided by the Relocation Act is there an EDGE tax credit that is unavailable to non-CHRA companies, but since this is in the future, it is irrelevant to this dispute.[2358]

7.915 Third, the United States argues that the property tax abatements are not specific "because Illinois law permits any taxing district in the State to abate the property taxes of numerous types of enterprises".[2359]

7.916 The United States does not dispute that the lease retirement payment is specific within the meaning of Article 2.[2360]

(iii) Evaluation by the Panel

7.917 The parties agree that one of the four subsidies, i.e. the lease retirement payment, is specific within the meaning of Article 2.[2361] The main point of disagreement is whether the three subsidies provided to Boeing pursuant to the CHRA are de facto specific within the meaning of Article 2.1(c) of the SCM Agreement. In the Panel's view, the three subsidies provided to Boeing under the CHRA are clearly de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.

7.918 First, Boeing is the only company that has met the statutory definition of an "eligible business" with a "qualifying project", and it is not in dispute that Boeing is the only company that has ever received these subsidies.[2362] The fact that Boeing was the only company that ever received these subsidies is perhaps not surprising, given the European Communities' unrebutted assertions that only a limited group of U.S. companies (less than 75) located outside of Illinois had revenues of over $25 billion in 2002, and that none of those had announced plans to move to Illinois in the pertinent timeframe.[2363]

7.919 Second, as a result of the expiry of the statutory time limits for applying for these subsidies, no company other than Boeing will ever receive these subsidies.[2364] As we have explained above, the CHRA provides that in order to obtain the reimbursement for relocation costs, an "eligible business" had to propose a "qualifying project" by 1 July 2004. The CHRA likewise provides that, to receive a 15-year EDGE tax credit, an "eligible business" had to propose a "qualifying project" no later than 1 July 2004. The CHRA granted both the City of Chicago and the County of Cook, as taxing districts, the authority to abate or refund certain property taxes, so long as such property tax abatements/refunds were approved by 1 August 2006.

7.920 Third, the fact that Boeing is the only company that has ever received and the only company that will ever receive these subsidies is no coincidence, given the numerous government publications, statements by members of the Illinois General Assembly, press reports, and other sources that demonstrate that the CHRA was tailored specifically for Boeing.[2365] Among other things, an Illinois Department of Commerce and Community Affairs publication explains that the CHRA "was endorsed

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[2358] United States' first written submission, paras. 670-672.

[2359] United States' first written submission, para. 680.

[2360] United States' first written submission, para. 683; United States' response to question 13, para. 29 ("The retirement of the lease by the City of Chicago is a subsidy that is specific within the meaning of Articles 1 and 2 of the SCM Agreement.")

[2361] United States' first written submission, para. 683; United States' response to question 13, para. 29 ("The retirement of the lease by the City of Chicago is a subsidy that is specific within the meaning of Articles 1 and 2 of the SCM Agreement.")

[2362] European Communities' first written submission, paras. 390-391, 411, 415, 441.

[2363] European Communities' first written submission, footnote 607 (citing The 500 Largest U.S. Corporations, Fortune, 15 April 2002, Exhibit EC-230, F-1).

[2364] European Communities' first written submission, paras. 391, 412, 443.

[2365] European Communities' first written submission, paras. 392-395, 412-414, 442-443.

in concept by the four legislative leaders during negotiations with the Boeing Company in April {2001}".[2366] An Illinois Economic and Fiscal Commission publication explains that "{i}n addition to financial and tax incentives, some states have used customized, company-specific incentives to engage in bidding wars which other states, such as Illinois did in obtaining Boeing's headquarters".[2367] Legislators referred to the CHRA as the "Boeing package"[2368], or otherwise made clear that they understood that the law was being created specifically for Boeing.[2369] A press report issued by the Illinois Government upon Boeing's announcement that it would move its headquarters to Chicago indicates that "the Governor said the General Assembly would be asked to make minor modifications to existing incentive programs to meet Boeing's specific needs. Legislation would be introduced this session".[2370]

7.921 The United States does not dispute any of those facts. Rather, it argues that notwithstanding these facts, the European Communities has failed to demonstrate that the subsidies are specific. The Panel considers the United States' arguments to be unpersuasive.

7.922 The United States argues that the definition of "eligible business" and "qualifying project" is not *de jure* specific under Article 2.1(a) of the SCM Agreement because "it is not explicitly limited to Boeing or similar enterprises", and is non-specific under Article 2.1(b) of the SCM Agreement because it "contains objective criteria governing the eligibility for and the amount of costs that may be reimbursed". In the Panel's view, even if these arguments were correct, they are not relevant given the fact that the European Communities argues that the subsidies are de facto specific under Article 2.1(c) of the SCM Agreement. Article 2.1(c) provides that a subsidy may be de facto specific "notwithstanding" any "appearance" of non-specificity under sub-paragraphs (a) and (b). The use of the term "notwithstanding" indicates that if such an analysis leads to a finding of de facto specificity, any appearance of non-specificity under sub-paragraphs (a) and (b) can be disregarded. Therefore, if a subsidy is de facto specific under Article 2.1(c), this is dispositive of the matter.

7.923 The United States argues that although Boeing was the only company that ever received the CHRA subsidies, this does not indicate de facto specificity under Article 2.1(c) of the SCM Agreement because of "the short length of time for this program".[2371] The Panel agrees that Article 2.1(c) mandates that in considering de facto specificity, a Panel must take into account "the length of time during which the subsidy programme has been in operation". We have taken this consideration into account. However, rather than calling into question the conclusion that the subsidies are de facto specific to Boeing, the 2001-2006 statutory "window" for applying for CHRA subsidies simply reinforces that the CHRA subsidies were designed specifically for Boeing.

[2366] Memo to Honorable Members of the General Assembly from Pam McDonough, Director, Department of Commerce and Community Affairs, regarding the Corporate Headquarters Relocation Act, 23 May 2001.

[2367] Illinois Economic and Fiscal Commission, Corporate Incentives in the State of Illinois, August 2001, Exhibit EC-221, p. 20.

[2368] See e.g. State of Illinois, 92nd General Assembly, House of Representatives, Transcription Debate, 69th Legislative Day, 31 May 2001, Exhibit EC-234, p. 105.

[2369] See e.g. State of Illinois, 92nd General Assembly, House of Representatives, Transcription Debate, 69th Legislative Day, 31 May 2001, Exhibit EC-234, p. 103 (Floor Statement of Representative Franks) ("I think it's important that the state does provide incentives for Boeing."), p. 98 (Floor Statement of Representative Wojcik) ("I compliment the Governor and I compliment DCCA for their fine efforts in recruiting Boeing to Illinois."), p. 97 (Floor Statement of Representative Mulligan) ("What we need to do is to continue to work to have companies like Boeing move here."), p. 95 (Floor Statement of Representative Fritchey) ("I have a lot of respect for the people involved in the negotiation of the Boeing package, people from the city, people from the state, people from DCCA, the Legislators involved.").

[2370] Press Release from the Office of Illinois Governor George Ryan, "Governor Ryan, Mayor Daley Welcome Boeing's Global Headquarters to Chicago", 10 May 2001, Exhibit EC-215.

[2371] United States' first written submission, para. 664.

7.924 The United States argues that only during the five-year extension provided by the CHRA is there an EDGE tax credit that is unavailable to non-CHRA companies, i.e. to companies other than an "eligible business" under the CHRA.[2372] In other words, the Panel understands the United States to argue that for the first 10 years of the EDGE tax credit, the subsidy is not specific, and that it is only for the last five years of the 15-year EDGE tax credit that there would be a specific subsidy. Leaving aside the question of whether the 15-year EDGE tax credits granted to Boeing under the CHRA can be split into a 10-year subsidy and five-year subsidy for the purposes of Article 2 of the SCM Agreement, the United States' argument rests on a false premise, namely, that "for the first ten years, benefits to Boeing are the same as to any other recipient of the EDGE tax credits".[2373] First, the CHRA provides that when an "eligible business" makes use of the 15-year EDGE tax credit, it "applies against its State income tax liability, during the entire 15-year period, *no more than 60%* of the maximum credit per year that would otherwise be available under this Act".[2374] Thus, the *amount* of the EDGE tax credit that an "eligible business" receives is also different. Second, while the EDGE Tax Credit Act provides that the credit may generally not be claimed "with respect to any jobs that the taxpayer relocates from one site in Illinois to another site in Illinois", the CHRA provides that "any-full time employee of an eligible business relocated to Illinois in connection with that of a qualifying project *is deemed to be a new employee* for purposes of this Act".[2375] Thus, the *kinds* of tax credits that an "eligible business" may claim under the EDGE tax credit are different. In sum, it is clear that for "the first ten years", benefits to Boeing are *not* the same as to any other recipient of the EDGE tax credits. The Panel recalls that the CHRA indicates that its purpose is to encourage the relocation of the international headquarters of large, multinational corporations to a location within Illinois "through the use of incentives ... that would otherwise not be available through existing incentives programs".[2376]

7.925 Finally, the United States argues that the property tax abatements are not specific "because Illinois law permits any taxing district in the State to abate the property taxes of numerous types of enterprises".[2377] In support of this argument, the United States refers the Panel to the provision of the Illinois tax code that authorizes taxing districts to abate the property taxes of "commercial and industrial firms", "academic or research institutes", "historical societies", "recreational facilities", "housing for older persons", "property used for horse or auto racing", and "relocated corporate headquarters".[2378] The Panel accepts that Illinois law permits any taxing district in the State to abate the property taxes of numerous types of industries. However, the Panel fails to see the relevance of that fact because the Panel observes that the provision of the Illinois tax code that contains this authorization makes clear that each one of the listed enterprises and industries is subject to a *different set of terms, conditions and limitations*.

7.926 For instance, the *duration* of these property tax abatements differ from one another: not more than 10 years in the case of most "commercial and industrial firms" (except a development of at least 500 acres, in which case it is not more than 20 years), "horse and auto racing", and "recreational firms"; not more than 15 years in the case of "housing for older persons"; at least 15 years in the case of "academic or research institutes"; and not more than 20 years in the case of "relocated corporate headquarters". To take another example, the *maximum dollar amount* that may be claimed differs:

[2372] United States' first written submission, paras. 670-672.

[2373] United States' response to question 261, para. 454.

[2374] 35 ILCS § 10/5-45(b), Exhibit EC-224 (emphasis added). See also, Illinois Economic and Fiscal Commission, Corporate Incentives in the State of Illinois, August 2001, Exhibit EC-221, p. 19 (explaining that "{u}nder the original deal with Boeing, the 60% provision was not included, but legislators wanted this provision included in the bill, which Boeing later accepted").

[2375] Corporate Headquarters Relocation Act, 2001 Ill. Pub. Act 92-0207, Exhibit EC-216.

[2376] Corporate Headquarters Relocation Act, 2001 Ill. Pub. Act 92-0207, Exhibit EC-216.

[2377] United States' first written submission, para. 680.

[2378] 35 ILL. COMP. STAT. § 200/18-165, Exhibit EC-225.

not more than $3 million for "housing for older persons"; generally not more than $4 million in the case of "commercial and industrial firms" (except a development of at least 500 acres, in which case not more than $12 million); not more than $5 million in the case of "horse racing" and "academic or research institutes"; no stated maximum dollar limit in the case of "auto racing" or "historical society" or "recreational facilities". Furthermore, this provision sets forth *different methods for calculating the applicable property tax abatements* for the different enterprises and industries that are listed. In some cases (e.g. "commercial and industrial"), there is a very detailed methodology. In others, no calculation methodology is set forth. As the United States itself notes, the methods for calculating the applicable property tax abatements for Boeing are memorialized in the two separate agreements that it entered into with Chicago and Cook County.[2379] In addition, the provision sets forth different rules regarding what *types of property* may be subject to the property tax abatement granted to the particular type of enterprise or industry.

7.927 In our view, the fact that Illinois law permits taxing authorities to grant different property tax abatements to different enterprises and industries subject to different sets of terms, conditions and limitations does not call into question that the property tax abatements granted to "eligible businesses" (i.e. Boeing) under the CHRA are de facto specific under Article 2.1(c) of the SCM Agreement. The Panel again recalls that the CHRA indicates that its purpose is to encourage the relocation of the

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[2379] United States' first written submission, para. 674. The United States elaborates upon the formula at paragraphs 675-677 of its first written submission:

> "The two agreements – which by their terms are substantially identical – set out a formula for determining the value of the property tax abatements Boeing may receive as a result of its occupancy of its corporate headquarters at 100 North Riverside Plaza in Chicago. Specifically, the value of the property tax abatements is the product of: (a) the portion of the property's total property tax bill that Boeing has paid in a given year; and (b) the "allocable share" of the property's total property tax bill that is attributable to City of Chicago or Cook County taxes, as the case may be. Thus, for example, if Boeing's share of the property's total tax bill in a given year were $50 out of $150 and the "allocable share" of the property's total tax bill attributable to the City of Chicago (as opposed to other jurisdictions) was 80 per cent, Boeing would be entitled to a property tax abatement of $40 from the City of Chicago.
>
> The two agreements, however, provide certain limitations on Boeing's entitlement to property tax abatements. First, the value of Boeing's tax abatement may not exceed – as a percentage of the property's total property tax bill – the ratio of rentable square feet leased to and occupied by Boeing and the total number of rentable square feet in the property. Under the agreements, this ratio is 0.3573. In other words, notwithstanding the formula discussed in the paragraph above, Boeing's total property tax abatement may not exceed 35.73 per cent of the property's total property tax bill. Thus, if Boeing occupied half of the property, such that it paid $50 of the property's total tax bill of $100 (and still assuming that the "allocable share" of the property's total tax bill attributable to the City of Chicago were 80 per cent), Boeing would be entitled to a property tax abatement of only $35.73 from the City of Chicago, rather than a $40 property tax abatement.
>
> Second, Boeing's entitlement to abatement of its property taxes further depends on the number of employees it maintains at its corporate headquarters in the 100 North Riverside building. If Boeing maintains 500 or more employees at that location, it may receive 100 per cent of the figure calculated according to the formula in the above paragraphs. If, however, it employs fewer than 500 people, its property tax abatement is reduced as follows {...} Thus, to take again the example cited above, if Boeing employed only 450 people in its corporate headquarters in a given year (and still assuming that the "allocable share" of the property's total tax bill attributable to the City of Chicago were 80 per cent), Boeing would be entitled to a property tax abatement of only $36 from the City of Chicago, or 90 per cent of the $40 tax abatement it would otherwise receive if it had met the 500-employee threshold."

international headquarters of large, multinational corporations to a location within Illinois "through the use of incentives ... that would otherwise not be available through existing incentives programs".[2380]

7.928 For these reasons, the Panel finds that the CHRA subsidies to Boeing are de facto specific under Article 2.1(c) of the SCM Agreement, and that it is therefore not necessary to make a finding on whether the property tax abatements and refunds are also *de jure* specific under Article 2.1(a) of the SCM Agreement. The Panel recalls that the parties agree that the lease retirement payment is specific within the meaning of Article 2.[2381]

(e) The amount of the subsidy to Boeing's LCA division

(i) Arguments of the European Communities

7.929 The European Communities estimates that the total amount of the four subsidies to Boeing's LCA division is approximately $25 million over the period 2002-2021. More specifically, the European Communities estimates that: (i) the amount of the subsidy to Boeing's LCA division from the relocation reimbursements from 2002 through 2011 (or until the relocation costs are paid in full) is $4.3 million; (ii) the amount of the subsidy to Boeing's LCA division from the EDGE tax credits is $8.5 million from 2003 through 2017; (iii) the amount of the subsidy to Boeing's LCA division from the local property tax abatements provided by the City of Chicago and Cook County is $11.5 million from 2002 through 2021; and (iv) the amount of the subsidy to Boeing's LCA division from the lease retirement payment is $0.5 million in 2003.[2382]

(ii) Arguments of the United States

7.930 The United States argues that any amounts that Boeing receives after 2006 are "speculative" and fall outside of the Panel's terms of reference. The United States asserts that the total value of the four subsidies to Boeing's LCA division is **[***]** million over the period 2002-2006.

(iii) Evaluation by the Panel

7.931 Before addressing the relatively narrow point of disagreement between the parties, the Panel will first set forth the points in respect of which the parties appear to be in agreement.

7.932 First, there is no disagreement on the question of whether and if so how much of the subsidies provided to The Boeing Company by the State of Illinois and municipalities therein should be allocated to Boeing's LCA division. The European Communities argues that 50 per cent of the total amount of the subsidies provided to The Boeing Company by the State of Illinois and municipalities therein should be allocated to Boeing's LCA division because, over time, approximately 50 per cent of Boeing's total sales have related to LCA.[2383] The United States agrees that 50 per cent of the value of these four subsidies should be allocated to Boeing's LCA division.[2384] The Panel sees no reason to

[2380] Corporate Headquarters Relocation Act, 2001 Ill. Pub. Act 92-0207, Exhibit EC-216.

[2381] United States' first written submission, para. 683; United States' response to question 13, para. 29 ("The retirement of the lease by the City of Chicago is a subsidy that is specific within the meaning of Articles 1 and 2 of the SCM Agreement.")

[2382] European Communities' first written submission, paras. 384 and 387, 405 and 408, 430 and 433; 449 and 452; State and Local Subsidies to Boeing LCA Division, Exhibit EC-27, pp. 1-2.

[2383] European Communities' first written submission, para. 384 and footnote 615, para. 405 and footnote 643, para. 430 and footnote 676, and para. 449 and footnote 697 (citing Boeing/MD LCA Allocation Charts, Exhibit EC-18.)

[2384] United States' first written submission, paras. 663, 679, and 682.

disagree with the European Communities' allocation methodology, and will therefore allocate 50 per cent of any subsidies provided to The Boeing Company to Boeing's LCA division.

7.933 Second, there is no disagreement regarding the amount of the subsidy provided to The Boeing Company (and hence the total amount of the subsidy allocable to Boeing's LCA division) for three of the four measures over the period 2002-2006. The parties agree that the amount of the subsidy to Boeing's LCA division arising from the reimbursement of relocation expenses is **[***]** over the period 2002-2006, that the amount of the subsidy to Boeing's LCA division arising from the property tax abatements is **[***]** million over the period 2002-2006, and that the amount of the subsidy to Boeing's LCA division arising from the lease payment is $0.5 million over the period 2002-2006.[2385] The Panel sees no reason to disagree, given that each of these figures is sufficiently substantiated by evidence submitted by the United States and/or the European Communities.[2386]

7.934 Third, neither party argues that it is necessary for the Panel to arrive at an estimate of the post-2006 amounts of the subsidies provided to Boeing by the three CHRA measures. The European Communities explains that "the estimates of future {i.e. post-2006} payments from all three subsidies referenced in the Panel's question have *no* impact on the European Communities' analysis of present adverse effects. These particular subsidy amounts are applied to the year that the subsidy was received".[2387] The European Communities estimates that the total amount of the subsidy to Boeing's LCA division from the reimbursement of relocation expenses would be $4.3 million over the period 2002-2011, that the total amount of the subsidy to Boeing's LCA division from the EDGE tax credits would be approximately $17 million over the period 2003-2017, and that the total amount of the subsidy to Boeing's LCA division from the local property tax abatements would be $11.5 million over the period 2002-2021.[2388] According to the United States, the post-2006 amounts are

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[2385] United States' first written submission, paras. 661-663, 678-679, 682; European Communities' second written submission, paras. 276, 301 and 308.

[2386] Regarding the amount of the subsidy arising from the reimbursement for relocation expenses, the information is found in Illinois Corporate Headquarters Relocation Act Relocation Grant Expenses, 2002-2006, Exhibit US-255 (BCI). For each year, the amounts claimed by Boeing are indicated on the first page of "Exhibit B", within Exhibit US-255. The pages that include the amounts of reimbursement claimed by Boeing each year are signed by an Executive Officer of the Boeing Company who states that "under penalty of perjury, I certify that the above information is true and correct". Regarding the amount of the property tax abatements, see City of Chicago Property Tax Abatements 2002-2006, Exhibit US-262 and Cook County Property Tax Abatements 2002-2006, Exhibit US-263 (BCI), which contain the "Annual Reimbursement Forms" submitted by Boeing to the City of Chicago and the County of Cook, pursuant to the "Tax Reimbursement Payment Agreement". Regarding the amount of the lease payment, see Lease Termination Compensation Agreement between 100 North Riverside, LLC and the City of Chicago, 15 January 2003, Exhibit EC-217, p. 2, which indicates the amount paid by the City to the landlord.

[2387] European Communities' comments on United States' response to question 368, para. 201 (emphasis original).

[2388] European Communities' first written submission, paras. 384, 405 and 430. The European Communities' estimates of the amounts of these subsidies on a yearly basis is set forth in International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Appendix A, and also in State and Local Subsidies to Boeing LCA Division, Exhibit EC-27. After the United States provided information indicating that the actual amount of the relocation expenses reimbursed to Boeing during the period 2002-2006 was higher than the European Communities estimate of the amount that Boeing received over the period 2002-2006, the European Communities submitted that the amount of the subsidy to Boeing's LCA Division from the reimbursement of relocation expenses over the period 2007-2011 "may be as high as **[***]**". The European Communities calculates this by noting that the figures provided by the United States indicate that total reimbursement to Boeing **[***]** by approximately **[***]** between 2004 and 2005 and by approximately **[***]** between 2005 and 2006. According to the European Communities, if Boeing's annual reimbursement continues to **[***]** at this pace, Boeing may receive the maximum possible reimbursement for its relocation costs by 2011, namely 50 per cent of its relocation expenses. Therefore, the European Communities concludes that the total

"speculative", and are "not within the Panel's terms of reference" because they were not "a measure in existence at the time this Panel was established".[2389] Because it appears to be unnecessary for the Panel to arrive at an estimate of the post-2006 amounts of the subsidies provided to Boeing by the three CHRA measures, the Panel considers it unnecessary to resolve these other issues.

7.935 The point of disagreement concerns the amount of the EDGE tax credit subsidy to Boeing over the period 2002-2006. The European Communities estimates that the total amount of the subsidy to Boeing's LCA division from the EDGE tax credits would be approximately $17 million over the period 2003-2017, including $2.4 million over the period 2003-2006.[2390] The European Communities bases its estimate on the figures contained in two publicly available documents, both prepared and dated 2001, setting forth the State of Illinois' own estimate of the amount of the EDGE tax credit subsidy to Boeing.[2391] The European Communities indicates that it attempted to obtain more precise figures through the Freedom of Information Act, but that the State of Illinois refused to provide it with such information.[2392] The United States asserts that the State of Illinois made **[***]** financial contribution to Boeing in relation to the EDGE tax credits between 2003-2006 because **[***]**.[2393] However, the United States notes that in 2002 **[***]**.[2394] At paragraph 289 of its second written submission, the European Communities responds that:

> "Finally, as to the amount of financial contribution to Boeing's LCA division from these EDGE tax credits, the United States has offered no support for its assertion that the amount is less than the $17 million from 2003 through 2017 claimed by the European Communities. The United States simply asserts that **[***]** without providing Boeing's Illinois corporate income tax returns for those years. Absent such concrete evidence, there is no basis to accept the United States' assertion. ..."

7.936 The Panel asked the United States to respond to the European Communities' arguments at paragraph 289 of its second written submission, but the United States only indicated that "{a}s ... stated previously, Boeing has **[***]**".[2395]

7.937 The Panel considers that the European Communities' estimate is supported by evidence, and that the United States assertions are not supported by any evidence. We recall that the European Communities relies on the State's 2001 estimates of the amount of revenue it will forego

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financial contribution to Boeing is **[***]** from 2002 through 2011. European Communities' second written submission, para. 276.

[2389] United States' first written submission, para. 663; United States' first written submission, para. 669; United States' first written submission, para. 679. In its response to question 368, the United States confirms the Panel's understanding that the United States' arguments relating to post-2006 measures concern the amount of the subsidies, rather than the existence of the subsidies.

[2390] The European Communities' estimates of the amounts of these subsidies on a yearly basis is set forth in International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Appendix A, and also in State and Local Subsidies to Boeing LCA Division, Exhibit EC-27.

[2391] Illinois Economic and Fiscal Commission, Corporate Incentives in the State of Illinois, August 2001, Exhibit EC-221, p. 19; Testimony of Pam McDonough to the Illinois House Revenue Committee, 23 May 2001, Exhibit EC-233, p. 3.

[2392] European Communities' first written submission, para. 403.

[2393] United States' first written submission, para. 669.

[2394] United States' first written submission, para. 669, footnote 863. We note that the United States provides Boeing's Corporate Income Tax Return in the State of Illinois for 2002, and this tax return indicates that in 2002 Boeing claimed an EDGE tax credit to the value of **[***]**. See Boeing 2002 Illinois Corporate Income Tax Return, Exhibit US-259 (BCI), p.2.

[2395] United States' response to question 260, para. 453.

under the EDGE tax credit scheme.[2396] In contrast, the United States does not provide any evidence to support its assertion that **[***]**. The Panel provided the United States with an opportunity to respond to the European Communities' argument on this very point, and it did not do so. We consider the European Communities' estimate to be based on the best publicly available information and we accept it. Consequently, we quantify the value of the tax credits received by Boeing in the period 2003-2006 as $2.4 million.[2397] Adding to this 50 per cent of the value of the EDGE tax credit that Boeing received in 2002[2398], we estimate that the amount of the subsidy to Boeing's LCA division arising from the EDGE tax credit over the period 2002-2006 is **[***]**, i.e. $2.4 million + **[***]**.

7.938 In sum, the Panel estimates that the amount of the subsidy to Boeing's LCA division arising from the four measures at issue is **[***]**.

(f) Conclusion

7.939 **For these reasons, the Panel finds that the four incentives that the State of Illinois and municipalities therein provided to Boeing in consideration for Boeing's decision to relocate its corporate headquarters to Chicago constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement, and estimates that the amount of the subsidy provided to Boeing's LCA division is approximately $11 million over the period 2002-2006.**

5. National Aeronautics and Space Administration (NASA) aeronautics R&D[2399]

(a) Introduction

7.940 The European Communities asserts that NASA provides Boeing with funding and support for aeronautics R&D pursuant to a number of R&D programmes. The European Communities argues that this funding and support constitutes a subsidy within the meaning of Article 1 of the SCM Agreement, and is specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that NASA provided $10.4 billion in subsidies to Boeing over the period 1989-2006.[2400]

7.941 The United States does not dispute that, under the eight NASA aeronautics R&D programmes at issue in this dispute, NASA made payments to Boeing, and that NASA provided Boeing with access to government facilities, equipment and employees for the purpose of performing aeronautics-related research. However, the United States argues that the payments and access to facilities,

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[2396] Illinois Economic and Fiscal Commission, Corporate Incentives in the State of Illinois, August 2001, Exhibit EC-221, p. 19; Testimony of Pam McDonough to the Illinois House Revenue Committee, 23 May 2001, Exhibit EC-233, p. 3.

[2397] European Communities' first written submission, para. 404. The European Communities estimates that Boeing will receive $1.13 million per year in EDGE tax credits, and submits that 50 per cent of this should be allocated to the Boeing LCA Division.

[2398] As noted above, in 2002 Boeing claimed an EDGE tax credit of **[***]**. The parties agree that only 50 per cent of the value of these should be allocated to Boeing's LCA Division. 50 per cent of **[***]** is **[***]**.

[2399] The European Communities discusses the payments and access to "facilities, equipment and employees" that NASA allegedly granted to Boeing in two different parts of its first written submission. In Section VI:E.2, the European Communities discusses them both under the heading "NASA Aeronautics Research and Development". In Section VI:H of its first written submission, the European Communities elaborates on the latter under the heading "NASA/DOD Facilities, Equipment and Employees". In its first written submission, the United States addresses both in one section, entitled "NASA R&D". Likewise, in its second written submission the European Communities addresses both in only one section, entitled "NASA Aeronautics Research and Development". The Panel addresses the European Communities' arguments relating to payments and "facilities, equipment and employees" together in this section of its Report. The Panel will follow this same approach in respect of "Department of Defense (DOD) Aeronautics R&D".

[2400] NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division, Exhibit EC-25, p. 20.

equipment and employees that NASA provided to Boeing are not subsidies within the meaning of Article 1 of the SCM Agreement. The United States further argues that NASA's granting Boeing access to wind tunnels is not specific within the meaning of Article 2 of the SCM Agreement. In addition, the United States argues that the European Communities has overestimated the amount of any subsidy provided to Boeing by NASA. According to the United States, the total amount of payments made to Boeing under NASA R&D contracts and agreements entered into under the eight aeronautics R&D programmes at issue was $1.05 billion, out of which less than $775 million was LCA-related. According to the United States, the total value of the NASA facilities, equipment and employees provided to Boeing under these R&D contracts and agreements was less than $80 million.

(b) The measures at issue

7.942 From 1969 to 2002, aeronautics research each year accounted for between two and seven percent of NASA's total budget.[2401] It is common ground between the parties that most of NASA's budget is related to *space* activities, and it is also common ground between the parties that most of NASA's contracts with Boeing are unrelated to aeronautics.[2402] The scope of the European Communities claim is limited to *aeronautics*-related R&D.

7.943 The pertinent items of the European Communities' panel request[2403] read as follows:

> "a. allowing the US LCA industry to participate in research programmes, making payments to the US LCA industry under those programmes, or enabling the US LCA industry to exploit the results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ("LERD") or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research. The following are examples of such NASA programmes:
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> (i) <u>High Speed Research Program</u>
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> ...
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> (ii) <u>Advanced Subsonic Technology Program</u>
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> ...
>
> (iii) <u>Aviation Safety Program/Aviation Safety & Security Program/Aviation Security & Safety Program</u>
>
> ...

[2401] United States' first written submission, footnote 266.

[2402] The European Communities estimates that the value of payments and goods and services provided to Boeing for aeronautics R&D over the period 1989-2006 was $10.4 billion. In Boeing's Share of NASA Contracts, FY 1991-FY 2004, Exhibit EC-19, the European Communities indicates that the value of "Total NASA Contract Awards to Boeing/MD" over the period FY1991-FY2004 was approximately $32.064 billion. Note 1 to Exhibit EC-19 indicates that the information is drawn from NASA Annual Procurement Report, FY 1991-FY 2004, "One Hundred Principal Contractors", Exhibit EC-341. Thus, it appears that by the European Communities' estimate, the value of the payments and goods and services that NASA provided to Boeing for aeronautics-related R&D is roughly equal to one third of the total amount of payments that NASA made to Boeing over the period 1991-2004.

[2403] WT/DS353/2, items 2(a) and 2(b), pp. 6-8.

BCI deleted, as indicated **[***]**

(iv) Quiet Aircraft Technology Program

...

(v) High Performance Computing and Communications Program

...

(vi) Research & Technology Base Program

...

(vii) Advanced Composites Technology Program

...

(viii) Vehicle Systems Program

...

(ix) Materials and Structures Systems Technology Program, including advanced composites materials and structures research

...

(x) Aircraft Energy Efficiency Program, including Composite Primary Aircraft Structures, Transport Aircraft Systems Technology, and Advanced Composite Structures Technology Programs

...

b. providing the services of NASA employees, facilities, and equipment to support the R&D programmes listed above and paying salaries, personnel costs, and other institutional support, thereby providing valuable services to the US LCA industry on terms more favourable than available on the market or not at arm's length"

7.944 On the basis of the European Communities' panel request, written submissions and responses to questions, the Panel understands that the measures challenged by the European Communities in this dispute are the "payments"[2404] and "free access to NASA facilities, equipment and employees"[2405] that

[2404] In its Panel Request, the European Communities refers to NASA "making payments" to Boeing. In its first written submission, the European Communities refers to the "direct R&D funding" provided to Boeing in the form of "grants". European Communities' first written submission, paras. 524, 548, 572, 588, 603, 618, 631, and 650.

[2405] See e.g. European Communities' first written submission, paras. 890-891 ("In addition to funding the R&D efforts of the US LCA industry over the years, NASA and DOD have provided Boeing and McDonnell Douglas with substantial R&D support through free access to NASA/DOD facilities, equipment, and employees ... NASA, in particular, has provided Boeing with substantial benefit by giving Boeing free access to its facilities, equipment, and employees."); European Communities' response to question 148, para. 172 ("The European Communities uses the term "facilities, equipment, and employees" as a shorthand to describe the types of "goods and services" provided by NASA. For purposes of the European Communities' claim, the terms "facilities, equipment, and employees" and "goods and services" are interchangeable. The European Communities has described the "facilities, equipment, and employees" provided by NASA in detail in its prior submissions by citing to specific NASA Space Act Agreements and other contracts.") and

NASA provided to Boeing through R&D contracts and agreements entered into with Boeing[2406] under the following aeronautics R&D programmes: Advanced Composites Technology ("ACT"), High Speed Research ("HSR"), Advanced Subsonic Technology ("AST"), High Performance Computing and Communications ("HPCC"), Aviation Safety, Quiet Aircraft Technology ("QAT"), Vehicle Systems ("VSP"), and Research and Technology Base ("R&T Base").[2407]

7.945 NASA and Boeing entered into a number of R&D contracts and agreements with Boeing under the eight aeronautics R&D programmes at issue. The contracts and agreements essentially fall into two different categories: (i) "procurement contracts", (as distinguished from "assistance" instruments[2408]) and (ii) Space Act Agreements. U.S. laws and regulations establish legal conditions for using "procurement contracts". Specifically, this type of instrument may be used only where the "principal purpose" of the activity is the "acquisition of goods or services" for the "direct benefit or use" of the U.S. Government.[2409] In addition, NASA regulations provide that the types of Space Act Agreements challenged by the European Communities in this case, i.e. "non-reimbursable" or "partially reimbursable" Space Act Agreements, may only be entered into when the R&D conducted pursuant to the agreement will "further the Agency's missions".[2410] In this Report, we use the

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European Communities' response to question 148, paras. 180-182 ("the European Communities' claim is that NASA provides "facilities, equipment, and employees" to Boeing for LCA-related R&D. This claim is captured by the first element of item 2(b) of the European Communities' Panel Request. The second element of item 2(b) ... is intended to point out that "institutional support" reflects *part of* the value of the "facilities, equipment, and employees" provided by NASA. ... Item 2(d) serves as a more specific example of the types of facilities provided by NASA.").

[2406] See e.g. European Communities' first written submission, para. 457 ("NASA and DOD generally provide funding for LCA-related R&D through what they call "contracts," but what are in reality grants to Boeing/MD for LCA-related R&D expenses.") and European Communities' response to question 148, para. 171 ("NASA provides these "goods and services" in conjunction with the various contractual instruments (i.e. Space Act Agreements and other contracts) it enters into with Boeing under the eight NASA aeronautics R&D programs challenged in this dispute").

[2407] European Communities' first written submission, para. 476.

[2408] The Panel notes that the vast majority of the transactions between NASA and Boeing under the eight aeronautics R&D programmes at issue are "procurement contracts". However, in a few cases, the transactions between NASA and Boeing (or entities purchased by Boeing) under these programmes have been in the form of what are termed "assistance" instruments under U.S. law, and more specifically "cooperative agreements". According to the United States, there were only three cooperative agreements between Boeing and NASA, and a total of less than $5 million was allotted to these agreements. According to the United States, there were no other types of "assistance" instruments between NASA and Boeing. See Exhibit US-1245; United States' response to question 20(a), para. 46; United States' response to question 214, para. 345 and footnote 464; United States' response to question 328, paragraph 38 and footnote 55.

[2409] See, e.g. United States' first written submission, footnote 100 (citing 32 C.F.R. § 22.205(a) (Exhibit US-22) and 48 C.F.R. § 35.003) (Exhibit US-23)); *NASA Grants and Cooperative Agreement Handbook*, § 1260.12(b)(1) (Exhibit US-94); parties' responses and related comments to questions 20, 151, 154 and 191.

[2410] NASA policy regarding Space Act Agreements is set out in NASA Policy Directive 1050.1H, Exhibit US-108. The Space Act authorizes NASA "to enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any State, territory, or possession, or with any political subdivision thereof, or with any person, firm, association, corporation, or educational institution". The term "Space Act Agreements" refers to agreements that NASA enters into pursuant to the "other transactions" authority provided by the Space Act. NASA's policy directive governing Space Act Agreements explains:

> Under its Space Act authority, NASA has entered into a great number of agreements with diverse groups of people and organizations, both in the private and public sector, *in order to meet wide-ranging NASA mission and program requirements and objectives*. It is NASA's policy to utilize the broad authority granted to the Agency in the Space Act to further the Agency's missions.

expression "NASA R&D contracts" to mean NASA's procurement contracts with Boeing under the eight aeronautics R&D programmes at issue, "agreements" to mean NASA's non-reimbursable and partially reimbursable Space Act Agreements with Boeing under the eight aeronautics R&D programmes at issue, and "NASA R&D contracts and agreements" to cover both.

7.946 In response to a question from the Panel, the European Communities clarifies that it does not challenge NASA allowing Boeing to "participate" in research programmes as a distinct measure.[2411] With respect to NASA "enabling the US LCA industry to exploit the results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ('LERD') or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research", the European Communities addresses these measures primarily in the sections of its submissions regarding "NASA/DOD Intellectual Property Rights Transfers/Waivers".[2412]

7.947 We discuss the challenged measures in greater detail in the context of our evaluation of whether these measures constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement, and in the context of estimating the amount of any subsidy to Boeing's LCA division.

(c) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

7.948 In this section, we address whether the payments and access to facilities, equipment and employees that NASA provided to Boeing under the eight aeronautics R&D programmes at issue constitute a subsidy within the meaning of Article 1 of the SCM Agreement. We begin by addressing the question of whether the transactions involve a financial contribution covered by Article 1.1(a)(1) of the SCM Agreement. The two main issues raised by the arguments of the parties are: (i) whether transactions properly characterized as "purchases of services" are excluded from the scope of Article 1.1(a)(1); and (ii) whether NASA's R&D contracts with Boeing are properly characterized as "purchases of services". We will address these two issues in turn. If we find that the challenged measures provide financial contributions to Boeing, we will then address the question of whether those financial contributions are provided on terms that confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

NASA uses three different types of Space Act Agreement – reimbursable, partially reimbursable, and non-reimbursable. NASA provides goods and services under reimbursable Space Act Agreements when it "has unique goods, services, and facilities, not being fully utilized to accomplish mission needs, which it can make available to others on a non-interference basis, consistent with the Agency's missions". NASA requires full reimbursement, defined as "full cost recovery" for the goods services or facilities provided, where it does not receive any "benefit" from the use of its facilities. NASA also has the authority to accept partial reimbursement where a proposed contribution of the Agreement Partner is fair and reasonable compared to the NASA resources to be committed, NASA programme risks, and corresponding "benefits to NASA". Where NASA is "obtaining rights to intellectual property or data or some other benefit", there is a presumptive NASA interest that may justify partial reimbursement. In partial reimbursement situations, NASA policy is that "{a} determination to charge less than full cost should: (1) be accomplished consistent with NASA's written regulations and policies, (2) articulate the market pricing analysis, benefit to NASA, or other legal authority that supports less than full cost recovery, and (3) account for recovered and unrecovered costs in accordance with NASA financial management policy". NASA uses non-reimbursable Space Act Agreements where it works with "one or more Agreement Partners in a mutually beneficial activity that furthers the Agency's missions". In these situations, "each party bears the cost of its participation and there is no exchange of funds between the parties". NASA requires, under all non-reimbursable Space Act Agreements, that "the respective contributions of each Agreement Partner must be fair and reasonable compared to the NASA resources to be committed, NASA programme risks, and corresponding benefits to NASA."

[2411] European Communities' response to question 149.

[2412] European Communities' response to question 215.

BCI deleted, as indicated **[***]**

(i) Whether there is a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement

Whether transactions properly characterized as "purchases of services" are excluded from the scope of Article 1.1(a)(1) of the SCM Agreement

Arguments of the European Communities

7.949 The European Communities argues that transactions involving purchases of services are not excluded from the scope of Article 1.1(a)(1). Rather, the European Communities considers that Article 1.1(a)(1)(i) can be interpreted so as to cover any transaction involving a monetary payment to a recipient, regardless of whether or not the transaction involves a "purchase of services". Regarding the interpretation of Article 1.1(a)(1), the principal arguments of the European Communities are as follows: (i) the plain meaning of the terms of Article 1.1(a)(1)(i) ("a government practice involves a direct transfer of funds...") is broad enough to encompass a direct transfer of funds made pursuant to contracts for services; (ii) one can only speculate on why the drafters omitted the reference to purchases of services in the final draft of the SCM Agreement, as there is more than one possible explanation; (iii) Article 8.2(a) of the SCM Agreement confirms that purchases of services, at least with respect to contractual R&D support, are covered by Article 1.1(a)(1); (iv) excluding purchases of services from the scope of Article 1.1(a)(1) would create an enormous loophole in the coverage of and run counter to the overall object and purpose of the SCM Agreement; (v) the potential for partial overlap between the second part of Article 1.1(a)(1)(iii) ("or purchases goods") and different sub-paragraphs of Article 1.1(a)(1) does not, contrary to the United States argument, render the reference to purchases of goods in Article 1.1(a)(1)(iii) redundant or inutile; (vi) the reference to "equity infusion" (i.e. a purchase of shares) as an example of a "direct transfer of funds" in Article 1.1(a)(1)(i) confirms that purchases may be covered by Article 1.1(a)(1)(i); and (vii) what a government receives in exchange for its funding and support is an issue properly addressed under the "benefit" inquiry.[2413]

Arguments of the United States

7.950 The United States argues that governmental purchases of services are excluded from the scope of Article 1.1(a)(1). The principal arguments of the United States are as follows: (i) the ordinary meaning of the terms of Article 1.1(a)(1)(i) must be interpreted "in their context" and may not be interpreted so as to render other provisions of Article 1 meaningless; (ii) Article 8.2(a) of the SCM Agreement, which concerns "assistance" for research activities, does not support the view that "purchases" of services are covered by Article 1.1(a)(1); (iii) the European Communities misconstrues the object and purpose of the SCM Agreement, and ignores the fact that the definition of "financial contribution" was meant to exclude some measures from the disciplines of the SCM Agreement; (iv) the only defensible conclusion that flows from a review of the drafting history of Article 1.1(a)(1)(iii) is that the negotiators deleted the explicit reference to purchases of services because they intended that those types of transactions not be treated as a financial contribution; (v) the European Communities' interpretation of subparagraphs (i) and (iii) would render the reference to purchases of goods in Article 1.1(a)(1)(iii) redundant or inutile, and the examples to the contrary provided by the European Communities do not demonstrate otherwise; (vi) the fact that "equity infusion" is included as an example of a "direct transfer of funds" does not imply that purchase of goods or services are covered

[2413] European Communities' second written submission, paras. 349-364; European Communities' responses (and/or comments on United States responses) to questions 15, 17, 113, 114, 115, 116, 117, 118, 119, and 120.

by subparagraph (i); and (vii) giving effect to the omission of purchases of services from Article 1.1(a)(1) does not collapse the distinction between financial contribution and benefit.[2414]

Arguments of Third Parties

7.951 Australia and Brazil submit that "purchases of services" are not excluded from the scope of Article 1.1(a)(1) of the SCM Agreement.[2415] These third parties advance arguments that are essentially the same as those advanced by the European Communities. Among other things, both of these parties argue that excluding purchases of services from the scope of Article 1.1(a)(1) could create an "enormous loophole" in the coverage of and run counter to the overall object and purpose of the SCM Agreement.[2416]

7.952 Canada, Japan, and Korea take the position that purchases of services are excluded from the scope of Article 1.1(a)(1) of the SCM Agreement.[2417] These third parties advance arguments that are essentially the same as those advanced by the United States. Among other things, these third parties argue that the omission of any reference to the purchase of services in Article 1.1(a)(1)(iii) of the SCM Agreement reflected a deliberate choice by the drafters and must be given meaning.[2418]

Evaluation by the Panel

7.953 As the Panel sees it, the issue before it is whether transactions properly characterized as purchases of services are excluded from the scope of Article 1.1(a)(1)(i) of the SCM Agreement. This issue has not been addressed in any prior WTO panel or Appellate Body Report.[2419] There is no "subsequent agreement" regarding this issue between WTO Members within the meaning of Article 31(3)(a) of the Vienna Convention, and there is no "subsequent practice" establishing the agreement of WTO Members regarding this issue within the meaning of Article 31(3)(b) of the

[2414] United States' first written submission, paras. 48 and 218; United States' responses (and/or comments on European Communities responses) to questions 15, 17, 113, 114, 115, 116, 117, 118, 119, and 120.

[2415] Australia's written submission, paras. 19-26; Australia's response to questions 1, 5, and 6; Australia's oral statement, paras. 5-27; Brazil's written submission, paras. 9-15; Brazil's response to questions 1, 5, and 6; Brazil's oral statement, paras. 7-12.

[2416] See e.g. Brazil's written submission, para. 10 ("Obviously, such an enormous loophole was not intended by the drafters, and, accordingly, the Panel should reject the U.S. interpretation"); Australia's oral statement, para. 6 ("Australia finds force in the European Communities' argument that 'accepting the US argument that LCA-related R&D is a purchase of services simply because it is funded through contracts would create an enormous loophole in the SCM Agreement'").

[2417] Canada's response to questions 1 and 5; Canada's oral statement, paras. 3-11; Japan's response to question 1; Japan's oral statement, paras. 2-4; Korea's response to question 1.

[2418] See e.g. Canada's response to question 1, para. 3 ("the omission of any reference to the purchase of services in Article 1.1(a) (1) (iii) reflected a deliberate choice by the drafters"); Japan's oral statement, para. 2 ("Through this obvious omission, the SCM Agreement plainly exempts the government purchase of services from the definition of financial contribution"); Korea's response to question 1, para. 1 ("the SCM Agreement should be interpreted and applied as it was agreed upon at the Uruguay Round negotiations").

[2419] The issue before the Panel is not whether there are certain transactions that can be covered simultaneously by different sub-paragraphs of Article 1.1(a)(1), or covered simultaneously by both the SCM Agreement and the GATS. We do not exclude the possibility that certain transactions "might be covered simultaneously by different sub-paragraphs of Article 1.1(a)(1)" (Panel Report, *Japan – DRAMs (Korea)*, para. 7.439). Likewise, we understand that "measures that involve a service relating to a particular good or a service supplied in conjunction with a particular good" constitute a "category of measures that could be found to fall within the scope of both the GATT 1994 and the GATS" (Appellate Body Report, *EC – Bananas III*, para. 221), and see little difficulty with the proposition that measures that involve a service relating to a particular good or a service supplied in conjunction with a particular good constitute a category of measures that could be found to fall within the scope of both the SCM Agreement and the GATS.

Vienna Convention.[2420] Thus, to answer this question, the Panel must examine the ordinary meaning of the terms of Article 1.1(a)(1)(i), their context, and the object and purpose of the SCM Agreement, as required by Article 31(1) of the Vienna Convention. The Panel will also have recourse to supplementary means of interpretation under Article 32 of the Vienna Convention to confirm the meaning that arises from the application of Article 31 of the Vienna Convention.

7.954 Article 1.1(a)(1)(i) provides in relevant part that a financial contribution exists where "a government practice involves a direct transfer of funds (e.g. grants, loans, and equity infusion)". We accept that if the terms of Article 1.1(a)(1)(i) of the SCM Agreement are read in isolation, the ordinary meaning of the words "a government practice involves a direct transfer of funds" might be broad enough to cover purchases of services. First, there is nothing in the dictionary definitions of these terms to suggest that transactions properly characterized as purchases of services fall outside of their scope: the definition of "transfer" is "a conveyance from one person to another"[2421], and the definition of "funds" is "a stock or sum of money, *esp*. one set apart for a particular purpose" or "financial resources".[2422] Second, there is no qualifying or limiting language in the text of this

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[2420] In question 118, the Panel asked the United States and the European Communities whether there was an any subsequent practice, within the meaning of Article 31(3)(b) of the Vienna Convention, which establishes the agreement of Members on whether transactions involving the "purchase of a service" fall within the scope of Article 1.1(a)(1). In its response to question 118, the United States refers the Panel to the U.S. Court of Appeals for the Federal Circuit's ruling that the plain meaning of the text of the U.S. countervailing duty law implementing Article 1 of the SCM Agreement was "unambiguous" because:

> "Section 1677(5) is clear as to what constitutes a subsidy--and the purchase of a service by a foreign public entity, however related to the manufacture of a good, is not contemplated in the statute as being a subsidy. While the provision of services by a government entity to another entity for less than adequate compensation may be considered a subsidy, the plain language of § 1677(5) does not allow for the purchase of services by a government entity from another entity to be considered a subsidy. Furthermore, § 1677(5)(D)(iii) clearly shows that Congress was aware of the distinction between contracts for services and contracts for goods. Aware of the distinction, Congress could have easily included the purchase of services by public entities in the statutory definition of a subsidy. Because it did not, we must assume that the omission was intentional. See Clay v. United States, 537 U.S. 522, 528, 155 L. Ed. 2d 88, 123 S. Ct. 1072 (2003) ("When Congress includes particular language in one section of a statute but omits it in another section of the same Act, we have recognized, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion". *Eurodif, S.A. v. United States*, pp. 17-18 (Court of Appeals for the Federal Circuit, 3 Mar. 2005) (emphasis original) (footnotes omitted), Exhibit US-1264.

However, the United States indicates that it is "unaware of any other examples of subsequent practice that would establish an agreement of the Members as to whether transactions involving the purchase of a service fall within the scope of Article 1.1(a)(1)". United States' response to question 118, para. 26.

The European Communities comments that "The fact that the United States refers to the practice of *only one* WTO Member – itself – can be taken as an implicit acknowledgment that there is no "subsequent practice in the application of the treaty which establishes *the agreement of the parties* regarding its interpretation" pursuant to Article 31(3)(b) of the *Vienna Convention*. The unilateral actions/decisions of *one party* clearly do not reflect the "agreement *of the parties*". Therefore, the wording of the US countervailing duty law, and its interpretation by the US Court of Appeals for the Federal Circuit ("Federal Circuit"), are simply irrelevant for purposes of Article 31(3)(b) of the *Vienna Convention*". European Communities' comments on United States' response to question 18, para. 32 (emphasis original).

[2421] *Shorter Oxford English Dictionary*, L. Brown (ed.) (Clarendon Press, 2002), Vol. II, p. 3367. See also, *Webster's Online Dictionary*, defining "transfer" to mean, among other things, the "conveyance of right, title, or property, either real or personal, from one person to another, whether by sale, by gift, or otherwise".

[2422] *Shorter Oxford English Dictionary*, L. Brown (ed.) (Clarendon Press, 2002), Vol. I, p. 1042. See also, *Webster's Online Dictionary*, defining "funds" to mean, among other things, "Assets in the form of money" and "A reserve of money set aside for some purpose".

provision. Third, one of the examples of a "direct transfer of funds" given in Article 1.1(a)(1)(i) is that of "equity infusion", which refers to a situation in which a government "purchases" something (i.e. shares in a company).[2423] Fourth, previous panels and the Appellate Body have not given a restrictive interpretation to these terms.[2424] However, the terms of Article 1.1(a)(1)(i) must be read in their context.

7.955 The immediate context of Article 1.1(a)(1)(i) includes Article 1.1(a)(1)(iii) and Article 14(d) of the SCM Agreement. Article 1.1(a)(1)(iii) reads in its entirety, "a government *provides goods or services* other than general infrastructure, or *purchases goods*". Likewise, Article 14(d) of the SCM Agreement, which forms part of the context of Article 1 of the SCM Agreement[2425], mirrors the wording of Article 1.1(a)(1)(iii) in providing that "the *provision of goods or services* or *purchase of goods* by a government shall not be considered as conferring a benefit unless the provision is made for less than adequate remuneration, or the purchase is made for more than adequate remuneration". The omission must have some meaning.[2426] In other words, a textual analysis in accordance with the Vienna Convention requires an interpreter to consider both what is in the text, and at the same time what is *not* in the text. The glaring difference between the first and second parts of sub-paragraph (iii) necessarily implies that the parties intended to exclude purchases of services from the definition of Article 1.1(a)(1) of the SCM Agreement. Moreover, we recall that "omissions in different contexts" may carry different meanings.[2427] Article 1.1(a)(1) is a definitional provision that sets forth an exhaustive, closed list ("... i.e. where ...") of the types of transactions that constitute financial contributions under the SCM Agreement. The omission of the words "or services" in the context of a provision that sets forth an exhaustive, closed list of the kinds of transactions covered by the SCM Agreement only reinforces the implication that the parties intended to exclude purchases of services from the definition of "financial contribution" in Article 1.1(a)(1) of the SCM Agreement.[2428]

7.956 It must be emphasized that if the Panel were to invent a line of reasoning to support the view that transactions involving purchases of services are covered by other sub-paragraphs and elements of Article 1.1(a)(1) of the SCM Agreement, whether as a "direct transfer of funds" under Article 1.1(a)(1)(i) or otherwise, this would necessarily mean that transactions involving purchases of goods must also be covered by those same other sub-paragraphs and elements. That would mean that the term "purchases goods" in Article 1.1(a)(1)(iii) is redundant and inutile, because the scope and coverage of Article 1.1(a)(1) of the SCM Agreement would be precisely the same if those words had not been added to Article 1.1(a)(1)(iii). The Panel is not free to adopt a reading of Article 1 that would result in reducing key terms of that provision to "redundancy or inutility".[2429] Accordingly, the

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[2423] Panel Report, *EC – Countervailing Measures on DRAM Chips*, para. 7.92 ("Article 1.1(a)(1)(i) of the *SCM Agreement* provides that there is a financial contribution where a government practice involves a direct transfer of funds, such as in the case of a grant, loan and equity infusion for example. *The purchase of corporate bonds* is such a direct transfer of funds, and therefore constitutes a financial contribution.") (emphasis added)

[2424] Appellate Body Report, *Japan – DRAMs (Korea)*, para. 250 ("In our view, the term "funds" encompasses not only "money" but also financial resources and other financial claims more generally. The concept of "transfer of funds" adopted by Korea is too literal and mechanistic because it fails to encapsulate how financial transactions give rise to an alteration of obligations from which an accrual of financial resources results.")

[2425] Appellate Body Report, *Canada – Aircraft*, paras. 155 and 158.

[2426] See e.g. Appellate Body Report, *Canada – Autos*, para. 138, citing Appellate Body Report, *Japan – Alcoholic Beverages II*, p. 18.

[2427] Appellate Body Report, *Canada – Autos*, para. 138.

[2428] We note that the omission of purchases of "services" from Article 14(d) not only implies that the parties intended to excluded purchases of services from the scope of the SCM Agreement, but means also that there is no standard for determining whether purchases of "services" provide a "benefit" under Article 1.1(b).

[2429] See e.g. Appellate Body Report, *US – Gasoline*, p. 23; Appellate Body Report, *Japan – Alcoholic Beverages II*, p. 12; Appellate Body Report, *US – Underwear*, p. 16.

Panel is not free to accept the argument that transactions involving purchases of services (along with transactions involving purchases of goods) are covered by other sub-paragraphs and elements of Article 1.1(a)(1).

7.957 The context of Article 1.1(a)(1)(i) also includes (now lapsed) Article 8.2(a) of the SCM Agreement.[2430] The European Communities reasons that:

> "Article 8.2(a) states 'the following *subsidies* shall be non-actionable'[2431], and the first item on the list is 'assistance for research activities conducted by firms or by higher education for research on a contract basis with firms if {certain conditions are met}.' As correctly noted by Australia in its third party submission[2432], although this provision is no longer in force, and indeed never applied to civil aircraft pursuant to footnote 24, it expressly provides that government support of R&D on a contract basis is a 'subsidy,' and therefore by definition qualifies as a financial contribution."[2433]

7.958 We do not find this reasoning persuasive, and believe that the European Communities' argument is to some extent based on a misreading of the text of Article 8.2(a), which concerns "assistance" for research activities conducted by firms, including "assistance" for higher education or research establishments that conduct research for firms on a contract basis. In addition, Article 8.2(a) does not state that "government support of R&D on a contract basis" is a subsidy. Rather, Article 8.2(a) refers to government assistance for research activities conducted by firms "or by higher education or research establishments on a contract basis with firms". If the terms of Article 8.2(a) gave rise to the necessary implication that certain types of transactions necessarily constitute subsidies within the meaning of the SCM Agreement, we would of course agree that those types of transactions must logically involve a financial contribution within the meaning of Article 1.1(a)(1). The problem with the European Communities' argument is that there does not appear to be anything in Article 8.2(a) to suggest that governmental purchases of R&D services from firms fall within the scope of the SCM Agreement. By its own terms, Article 8.2(a) concerns "assistance" for research conducted by firms. If the only manner in which a government could provide "assistance" for research conducted by firms was by purchasing R&D services from firms, then the European Communities argument would rest on solid ground. However, this strikes us as a false premise.

7.959 Turning to "object and purpose", we recall that the Appellate Body has clarified that "the object and purpose of the SCM Agreement ... reflects a *delicate balance* between the Members that sought to impose more disciplines on the use of subsidies and those that sought to impose more disciplines on the application of countervailing measures".[2434] In addition, we find useful guidance in the reasoning of the panel in *US – Export Restraints*. In that case, the panel concluded that the type of measure at issue did not involve a financial contribution within the meaning of Article 1 of the SCM Agreement. In the course of interpreting Article 1, the Panel explained that:

[2430] Panel Report, *US – Upland Cotton*, footnotes 1086 ("We realize that this provision has now lapsed, by virtue of the operation of Article 31 of the *SCM Agreement*. ... However, these provisions can nevertheless be instructive in understanding the overall architecture of the Agreement with respect to the different types of subsidies it sought and seeks to address. We recall that the Decision by the Arbitrator in *US – FSC (Article 22.6 – US)*, footnote 66, expressed a similar view.")

[2431] Emphasis added.

[2432] Australia's written submission, paras. 20-21.

[2433] European Communities' response to question 15(a); European Communities' second written submission, para. 355.

[2434] Appellate Body Report, *US – Countervailing Duty Investigation on DRAMS*, para. 115 (emphasis added).

> "we do not see any contradiction between the said object and purpose of the SCM Agreement and the fact that certain measures that might be commonly understood to be subsidies that distort trade might in fact be *excluded* from the scope of the Agreement. Indeed, while the object and purpose of the Agreement clearly is to discipline subsidies that distort trade, this object and purpose can only be in respect of 'subsidies' *as defined* in the Agreement. This definition, which incorporates the notions of 'financial contribution', 'benefit', and 'specificity', was drafted with the express purpose of ensuring that not every government intervention in the market would fall within the coverage of the Agreement."[2435]

7.960 The Panel has given very careful consideration to the argument advanced by the European Communities, Brazil and Australia that excluding purchases of services from the scope of Article 1.1(a)(1) "would run counter to the overall object and purpose of the *SCM Agreement*" by creating "an enormous loophole in the coverage of the *SCM Agreement* and provide WTO Members with a roadmap for distorting trade in goods through "service contracts" with their goods producers".[2436] If a finding that purchases of services are excluded from the scope of the SCM Agreement necessarily led to the manifestly absurd result that a Member could turn a grant into an excluded "purchase of services" simply by that Member "labelling"[2437] the transaction a "contract" or "purchase of services", then such an interpretation would indeed run counter to the object and purpose of the SCM Agreement. However, a finding that transactions *properly characterized* as purchases of services are excluded from the scope of Article 1.1(a)(1) would not lead to such a result. There is every reason to believe that WTO panels and national investigating authorities will be able to detect transactions that are not properly characterized as purchases of services.

7.961 To confirm the meaning that arises from the application of Article 31 of the Vienna Convention, we now turn to "supplementary means" of interpretation under Article 32 of the Vienna Convention.

7.962 First, an examination of the preparatory work of Article 1.1(a)(1)(iii) and Article 14(d) of the SCM Agreement reveals that a reference to governmental "purchases of services" originally appeared in and was subsequently removed from the text of both of these provisions in the final draft. More specifically, the first and second drafts of Article 1.1(a)(1)(iii) referred to the *provision* of "goods or services", but not to *purchases* of either goods or services.[2438] In the third draft, an additional reference to *purchases* of "goods or services" was added to Article 1.1(a)(1)(iii), which was mirrored in the draft of Article 14(d).[2439] In this regard, Articles 1.1(a)(1)(iii) and 14(d) remained unchanged in the fourth draft, and in the first draft of the Final Act of the Uruguay Round.[2440] However, in the second draft of the Final Act, the reference to *purchases* of "services" was removed from both Article 1.1(a)(1)(iii) and Article 14(d), but the reference to purchases of "goods" was retained.[2441] In our view, the preparatory work confirms that the parties intended to exclude purchases of services from the scope of Article 1.1(a)(1).

[2435] Panel Report, *US – Export Restraints*, para. 8.63 (emphasis original). See also, Panel Report, *US - Softwood Lumber IV*, para. 7.29 (citing Panel Report, *US – Export Restraints*, para. 8.63, and reiterating that "the definition of a subsidy in Article 1 SCM Agreement reflects the Members' agreement that only certain types of government action are subject to the SCM Agreement, and also that not all government actions that may affect the market come within the ambit of the SCM Agreement.")

[2436] European Communities' response to question 15(a), para. 51; Brazil's written submission, para. 10; Australia's oral statement, para. 6.

[2437] European Communities' second written submission, paras. 356-361.

[2438] MTN/GNG/NG10/W/38 (dated 18 July 1990); MTN/GNG/NG10/W/38/Rev.1 (4 September 1990).

[2439] MTN/GNG/NG10/W/38/Rev.2 (2 November 1990).

[2440] MTN/GNG/NG10/W/38/Rev.3 (6 November 1990); MTN.TNC/W/35/Rev.1 (3 December 1990).

[2441] MTN/TNC/W/FA (20 December 1991).

7.963 According to the European Communities, "one can only speculate on why the drafters omitted the reference to purchases of services in the final draft of the *SCM Agreement*, as there is more than one possible explanation".[2442] The Panel considers that the European Communities has failed to provide the Panel with any plausible explanation of why the drafters deleted the reference to purchases of services from Article 1.1(a)(1)(iii) and Article 14(d) of the SCM Agreement. First, with respect to the hypothesis that the negotiators wished "to clarify that the *SCM Agreement* does not discipline subsidies that exclusively distort trade in services", excluding purchases of services does not convey this meaning, as the negotiators retained other types of financial contributions, which could just as easily exclusively distort trade in services. In addition, we agree with the United States that "one would think that if the negotiators sought to 'clarify' the complete exclusion of subsidies to 'services', they would pick a less oblique textual device".[2443] Second, with respect to the hypothesis that "the negotiators sought to be clear that the SCM Agreement applies only to those purchases of services that fall within other clauses of Article 1.1(a)(1)", the European Communities does not explain why the negotiators would seek such a result for purchases of services, but not purchases of goods. It is not plausible that purchases of services were omitted from Article 1.1(a)(1)(iii) in order to clarify that the SCM Agreement applies only to those purchases of "services" that fall within other clauses of Article 1.1(a)(1) (e.g. a purchase of services effected through a monetary payment), but that purchases of *goods* are covered by Article 1.1(a)(1) even *in the absence* of the payment of any consideration of the type that would otherwise fall within the scope of one of the other sub-paragraphs of Article 1.1(a)(1). Rather, as we have concluded above, the necessary implication of a finding that purchases of services are covered by other sub-paragraphs and elements of Article 1.1(a)(1) is that the words "or purchases goods" in Article 1.1(a)(1)(iii) are redundant and inutile.

7.964 Second, the "circumstances of {the} conclusion" of the SCM Agreement[2444], which include both pre-existing GATT disciplines regarding government procurement, relevant dispute settlement proceedings that took place under those disciplines, and also the negotiations that were underway to establish new disciplines regarding government procurement, including government procurement in respect of services, suggest to us that the drafters of Article 1 of the SCM Agreement would have understood the consequences of removing the reference to purchases of "services" in Article 1.

7.965 The scope of the 1979 Procurement Code was limited to the "procurement of products", and did not extend to "services contracts *per se*".[2445] In Article IX:6(b), the parties to the Procurement Code committed themselves to explore the possibilities of expanding the coverage of the Code to cover purchases of services.[2446] Article V:15(e) of the Procurement Code specifically addressed "contract{s} for research, experiment, study or original development".

7.966 At the time that the SCM Agreement was being negotiated, there were two GATT panel proceedings underway examining the meaning of these provisions. In *US - Sonar Mapping*[2447], the

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[2442] European Communities' response to question 15(a), paras. 52-53.

[2443] United States' comments on European Communities' response to question 15(a), para. 55.

[2444] With regard to "the circumstances of {the} conclusion" of a treaty, the Appellate Body has explained that "this permits, in appropriate cases, the examination of the historical background against which the treaty was negotiated." Appellate Body Report, *EC – Computer Equipment*, para. 86.

[2445] Paragraph 1(a) of Article I (Scope and Coverage) stated that "any law, regulation, procedure and practice regarding the procurement of products by the entities subject to this Agreement. This includes services incidental to the supply of products if the value of these incidental services does not exceed that of the products themselves, but not service contracts *per se*".

[2446] Article IX:6(b) stated that "Not later than the end of the third year from the entry into force of this Agreement and periodically thereafter, the Parties thereto shall undertake further negotiations, with a view to broadening and improving this Agreement on the basis of mutual reciprocity, having regard to the provisions of Article III relating to developing countries. In this connection, the Committee shall, at an early stage, explore the possibilities of expanding the coverage of this Agreement to include service contracts".

[2447] GATT Panel Report, *US – Sonar Mapping*, circulated 23 Apr 1992 (not adopted).

United States argued that the procurement at issue involved the procurement of a product under a "service contract", and was therefore excluded from the scope of the Procurement Code. The European Communities disagreed. The panel proceeded to analyse the meaning of the phrase "service contracts *per se*" in Article I:1(a). The panel ultimately rejected the United States' position, and found that the procurement at issue fell within the scope of the Code, based on its interpretation of the scope of Article I:1(a). In *Norway – Trondheim Toll Ring*[2448], the question before the panel was whether, under the contract in question, the Norwegian entity had procured prototypes which had been developed at its request in the course of, and for, a particular "contract for research or original development". The panel examined the different interpretations of Norway and the United States of the phrase "contract for research ... or original development" in Article V:15(e). The panel ultimately concluded that the procurement fell within the scope of the Procurement Code.

7.967 While these panel proceedings were underway, and while the SCM Agreement was being negotiated, the parties to the plurilateral Tokyo Round Procurement Code were in the process of extending the scope and coverage of that agreement to cover purchases of services. The renegotiation of the Code led to the WTO Agreement on Government Procurement.[2449] The WTO Agreement on Government Procurement "expand{s} the coverage of the Agreement to include service contracts".[2450]

7.968 While the SCM Agreement was being negotiated, parallel negotiations on trade in services were also taking place. Article XIII:2 and XV of the GATS reflect the fact that the negotiators of the GATS were unable to reach agreement on disciplines regarding governmental purchases of services, or on disciplines governing the provision of subsidies to service suppliers.

7.969 When the omission of "purchases" of "services" is read against this historical background, it becomes clear that the drafters could not have removed the express reference to "purchases" of "services" in Article 1.1(a)(1)(iii) on the understanding that the reference was superfluous, and that it would be understood and intended that such transactions were implicitly covered by Article 1.1(a)(1)(i). Rather, the exclusion of "purchases" of "services" from Article 1 can only be seen as a deliberate choice.

7.970 The Panel is not entitled to assume that the disappearance of certain terms from the text of Article 1 of the SCM Agreement "was merely accidental or an inadvertent oversight on the part of either harassed negotiators or inattentive draftsmen".[2451] The Panel must "read and interpret the words actually used" in Article 1, not the words that the Panel "may feel should have been used".[2452] It is not open to the Panel to impute into Article 1 "words that are not there".[2453] Having considered the ordinary meaning of the terms of Article 1.1(a)(1)(i), their context, the object and purpose of the SCM Agreement, and the preparatory work and circumstances of the conclusion of the SCM Agreement, the Panel finds that transactions *properly characterized* as purchases of services are excluded from the scope of Article 1.1(a)(1)(i) of the SCM Agreement.

[2448] GATT Panel Report, *Norway – Trondheim Toll Ring*, adopted 13 May 1992.

[2449] The Agreement on Government Procurement, a plurilateral agreement, is included in Annex 4 to the WTO Agreement.

[2450] Agreement on Government Procurement, preamble. See also, Article I (Scope and Coverage).

[2451] Appellate Body Report, *US – Underwear*, p. 17.

[2452] Appellate Body Report, *EC – Hormones*, para. 181.

[2453] Appellate Body Report, *India – Patents (US)*, para. 45.

BCI deleted, as indicated **[***]**

Whether NASA R&D contracts with Boeing are properly characterized as "purchases of services"

Arguments of the European Communities

7.971 In the introduction to the section of its first written submission addressing NASA, DOD and DOC aeronautics R&D, the European Communities asserts that "NASA and DOD generally provide funding for LCA-related R&D through what they call "contracts", but what are in reality grants to Boeing/MD for LCA-related R&D expenses".[2454] In the sections of its first written submission addressing NASA aeronautics R&D in particular, the European Communities argues in respect of each of the eight programmes that "NASA directly transferred funds in the form of grants to Boeing's LCA division".[2455] The European Communities argues that this "direct R&D funding"[2456] constitutes a direct transfer of funds within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.

7.972 The European Communities further argues, in respect of each of the eight programmes, that NASA provided Boeing with access to government "facilities, equipment and employees", which constitutes a provision of goods or services within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[2457] According to the European Communities, the value of these "facilities, equipment and employees" is partly captured in NASA's "institutional support" budgets, and the European Communities occasionally refers to the provision of access to facilities, equipment and employees as "institutional support".[2458]

7.973 In its second written submission, the European Communities responds to the United States' argument that NASA's R&D contracts with Boeing are "purchases of services" that fall outside of the scope of Article 1.1(a)(1) of the SCM Agreement. The European Communities argues that NASA's R&D contracts with Boeing cannot be characterized as "purchases of services", and that "purchases of services" are in any event not excluded from the scope of Article 1.1(a)(1).[2459]

7.974 In its response to question 15 from the Panel, the European Communities argues that NASA R&D contracts with Boeing are not properly characterized as "purchases of services" for four reasons. First, because "NASA R&D contracts do not ultimately aim at the acquisition of a service for the direct benefit and own use of the government". Rather, with regard to the NASA R&D contracts, the R&D that Boeing performs under the aspects of the eight aeronautics R&D programmes in question "ultimately benefits Boeing, and is not a service for the direct benefit and use of NASA". NASA is undisputedly "not in the business of manufacturing LCA or its parts, and therefore has no demonstrable need for the LCA-related R&D that Boeing performs under the programs in question".[2460] Second, because "NASA R&D contracts do not contain the typical elements of a purchase". In this regard, the European Communities reiterates that because NASA's contracts with Boeing "are intended to primarily and ultimately benefit Boeing's LCA manufacture", they deviate from a typical purchase where one would expect the purchased service to be of primary interest for the purchaser. The European Communities reiterates that "NASA, however, receives virtually

[2454] European Communities' first written submission, para. 457.
[2455] European Communities' first written submission, paras 524, 548, 572, 588, 603, 618, 631, and 650.
[2456] Ibid.
[2457] European Communities' first written submission, paras 524, 548, 572, 588, 603, 618, 631, 650, and 890-901.
[2458] See e.g. European Communities' response to question 148, para. 181 ("the European Communities' claim is that NASA provides "facilities, equipment, and employees" to Boeing for LCA-related R&D. This claim is captured by the first element of item 2(b) of the European Communities' Panel Request. The second element of item 2(b) ... is intended to point out that "institutional support" reflects *part of* the value of the "facilities, equipment, and employees" provided by NASA.")
[2459] European Communities' second written submission, paras. 329-365.
[2460] European Communities' response to question 15(c), para. 61.

nothing of value from these contracts, since it is not in the business of acquiring or manufacturing LCA or its parts".[2461] Third, because "NASA R&D contracts do not exclusively affect trade in services". The European Communities argues that the "R&D services" that Boeing performed under the aspects of the NASA R&D programs in question "relate directly to the production of LCA – i.e. goods".[2462] Fourth, because "Boeing is not a genuine provider of LCA-related R&D services". In this regard, the European Communities argues that "Boeing does not offer such R&D services to anybody else but NASA and DOD" and that "Boeing has not advertised itself as a service provider for LCA-related R&D in the market".[2463]

Arguments of the United States

7.975 With respect to the existence of a financial contribution, the United States submits that NASA's R&D contracts with Boeing are not "grants", as the European Communities asserts, but are rather "purchases of services". The United States argues that "purchases of services" are not covered by Article 1.1(a)(1) of the SCM Agreement. Accordingly, any payments and/or access to facilities, equipment and employees provided to Boeing under NASA R&D contracts are not financial contributions within the meaning of Article 1.1(a)(1). With regard to the European Communities' assertions, it is true that NASA does not acquire or produce large civil aircraft. However, NASA does acquire, produce, and disseminate knowledge. And, accordingly, the "true purpose" of the NASA programmes is to develop and disseminate the greatest amount of information to the broadest group in the shortest amount of time possible, and not to "convey resources to Boeing". That information is used both within government, by U.S. government agencies, such as the Federal Aviation Administration ("FAA") and DOD, and airport authorities, and outside of government by industry and academia. NASA's contracts with Boeing and its actions provide evidence that this is the case, and that the challenged measures are purchases of services – not just in name, but in substance. NASA formulates its own goals, based on consultations with a wide variety of stakeholders. NASA seeks proposals from contractors on how to meet those goals, and accepts the bid that presents the best value. NASA and its contractors negotiate over the terms of the contract. The contractor must then carry out all of the terms of the contract in return for payment by NASA. This process, documented by the citations to U.S. procurement regulations, the numerous examples of individual contracts and modifications, and the huge volume of publicly disseminated literature generated by these programmes, demonstrates that NASA's contracts with Boeing are not, as the European Communities would have the Panel believe, a "sham".[2464]

7.976 While the United States argues in its first written submission that Space Act Agreements should be analyzed as "purchases of services", it has subsequently adopted the view that both reimbursable and non-reimbursable Space Agreements involve a provision of goods and services by NASA.[2465] The United States accepts that the provision of (access to) facilities, equipment and employees provided to Boeing through the Space Act Agreements at issue constitutes a provision of goods or services within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

Evaluation by the Panel

7.977 Having concluded that purchases of services are excluded from the scope of Article 1.1(a)(1), the next question before the Panel is whether NASA R&D contracts are properly characterized as

[2461] European Communities' response to question 15(c), para. 63.
[2462] European Communities' response to question 15(c), para. 65.
[2463] European Communities' response to question 15(c), para. 67.
[2464] United States' first written submission, paras. 213-225; United States' second written submission, paras. 60-64; United States' responses (and/or comments on European Communities' responses) to questions 15(c), 16, 19, 20, 151, 154, 155, and 327.
[2465] United States' response to question 18, para. 39. See also, United States' response to question 161.

"purchases of services". The parties agree that NASA provides goods and services to Boeing, within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement, under Space Act Agreements.[2466] However, the parties disagree on the question of whether the payments and access to facilities, equipment and employees provided to Boeing through its R&D contracts with NASA are covered by the definition of "financial contribution" in Article 1.1(a)(1) of the SCM Agreement. In this regard, the United States argues that NASA's R&D contracts with Boeing are "purchases of services" that fall outside of the scope of Article 1.1(a)(1). As the Appellate Body has recognized, "{a}n evaluation of the existence of a financial contribution involves consideration of the *nature of the transaction* through which something of economic value is transferred by a government".[2467] In this case, the Panel's task is to reach a conclusion regarding the nature of NASA's aeronautics R&D contracts with Boeing.

7.978 In the Panel's view, whether or not NASA's R&D contracts with Boeing are properly characterized as a "purchase of services" depends on *the nature of the work* that Boeing was required to perform under the contracts, and more specifically, *whether the R&D that Boeing was required to conduct was principally for its own benefit and use, or whether it was principally for the benefit and use of the U.S. Government (or unrelated third parties*). This for several reasons. First, the Panel considers that NASA's R&D contracts with Boeing should be characterized based on their *terms*, and the core term[2468] of these contracts is the work that Boeing was required to perform. Second, it is inherent in the ordinary meaning of the concept of a "service" that the work performed be for the benefit and use of the entity funding the R&D (or unrelated third parties).[2469] Third, characterizing the transactions on the basis of whether the R&D that Boeing was required to conduct was principally for its own benefit and use, or whether it was principally for the benefit and use of the U.S. Government (or unrelated third parties), is broadly consistent with the arguments of the parties and third parties in this case.[2470] Fourth, focusing on whether the work performed was principally for the benefit and use of the government (or unrelated third parties) is consistent with prior GATT panel

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[2466] The European Communities has provided specific examples in its submissions of the "facilities, equipment and employees" provided to Boeing under NASA Space Act Agreements. European Communities' first written submission, para. 524, footnote 827; para. 614; para. 618, footnote 1020; para. 650, footnote 1071; para. 645; and para. 892; European Communities' second written submission, paras. 389, 390. In its response to question 148, the European Communities states that it "has described the 'facilities, equipment and employees' provided by NASA in detail in its prior submissions by citing to specific NASA Space Act Agreements and other contracts". European Communities' response to question 148, para. 172, footnote 161. See also, European Communities' response to question 148, para. 188, footnote 172.

[2467] Appellate Body Report, *US – Softwood Lumber IV*, para. 52 (emphasis added). The "nature" of something is generally defined as the basic or inherent features, character or quality of something; *Oxford Dictionary of English*, 2ed (rev), 2005, p. 1172.

[2468] The Panel uses the word "term" in its ordinary sense, i.e. "Conditions under which some action may be undertaken ... *stipulated requirememts* or limitations", and specifically, "Conditions with regard to payment for goods or services", and "A condition, a prerequisite of something." *Shorter Oxford English Dictionary*, p. 3215 (5th ed. 2002).

[2469] The *Shorter Oxford English Dictionary* defines "service" to mean, "An act of helping or benefiting *another* ... The action of serving, helping, or benefiting *another*; behaviour conducive to the welfare or advantage of *another*". *Shorter Oxford English Dictionary*, p. 2768 (5th ed. 2002) (emphasis added).

[2470] According to the European Communities, whether or not a transaction is properly characterized as a purchase of services depends, *inter alia*, on whether "the ultimate purpose of the transaction would need to be the acquisition of a service for the direct benefit and own use of the government". European Communities' response to question 15(b), para. 55. Canada notes that in general terms, "a service is the performance of duties or work for someone else", such that the relevant question is whether the government has "procured the performance of duties or work for itself or anyone else (other than the service seller)". Canada's response to question 5(c), paras. 4-7.

reports examining the question of whether a transaction was properly characterized as a government procurement.[2471]

7.979 Having formulated the question that needs to be asked and answered, the Panel now turns to the question of what kinds of evidence it will consider for the purpose of answering that question. In general, the Panel has eschewed any notion of focusing on one single fact for the purpose of reaching a conclusion on that question. Rather, the Panel believes that it should review all of the evidence regarding the terms and surrounding context of NASA's aeronautics R&D contracts with Boeing, with a view to reaching a conclusion on whether NASA's aeronautics R&D contracts with Boeing are, in essence, purchases of services. In the Panel's view, there is no reason why, for example, the type of instrument and so-called "formal" features of the transaction would be disregarded *if* they shed light on the question of the nature of the R&D activities required of Boeing under the contracts; there is likewise no reason why, for example, evidence of the purpose and motives of the programmes under which they were entered into would be disregarded *if* they shed light on the question of the nature of the R&D activities required of Boeing under the contracts. In both cases, they are not extraneous features divorced from the "terms" of the transactions; rather, they could be central to understanding the core *term* of the transaction. That is, this is evidence that could be very helpful in understanding whether the nature of the work performed under Boeing's R&D contracts with NASA (the core terms of the transactions) was principally for the U.S. Government's benefit or use (and/or for the benefit or use of unrelated third parties), or rather for Boeing's own benefit or use. That is the question that needs to be answered for the purpose of determining whether the transactions are properly characterized as purchases of services.

7.980 More specifically, the Panel will consider, *inter alia*, the legislation authorizing the programmes at issue, the types of instruments entered into between NASA and Boeing, whether NASA has any demonstrable use for the R&D performed under these programmes, the allocation of intellectual property rights under these transactions, and whether the transactions at issue had the typical elements of a "purchase of services".[2472]

7.981 When considered in its totality[2473], the evidence relating to NASA aeronautics R&D, some of which is individually discussed below, leads to the conclusion that the work that Boeing performed under its aeronautics R&D contracts with NASA was principally for its own benefit or use, rather than for the benefit or use of the U.S. Government (or unrelated third parties). Accordingly, the Panel

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[2471] In *US – Sonar Mapping*, the panel stated that "{w}hile not intending to offer a definition of government procurement within the meaning of Article I:1(a) {of the Tokyo Round Agreement on Government Procurement}, the Panel felt that in considering the facts of any particular case the following characteristics, none of which alone could be decisive, provide guidance as to whether a transaction should be regarded as government procurement within the meaning of Article I:1(a): payment by government, *governmental use of or benefit from the product*, government possession and government control over the obtaining of the product". The panel concluded that in that case, the government agency would "*enjoy the benefits* of the system's purchase - Antarctic research and the preparation of seabed maps – which were clearly *for government purposes*, and the Government can thus be regarded as the *ultimate beneficiary* of the system". (GATT Panel Report, *US – Sonar Mapping*, paras. 4.7 and 4.10 (emphasis added). See also, GATT Panel Report, *Norway – Trondheim*, paras. 4.8-4.13.)

[2472] As will become clear in our review of some of the evidence before the Panel, these different considerations overlap to a certain extent.

[2473] The Appellate Body has on a number of occasions stressed that a panel must consider the evidence before it "in its totality". See e.g. Appellate Body Report, *US – Continued Zeroing*, para. 331 ("Article 11 requires a panel to consider evidence before it in its totality, which includes consideration of submitted evidence in relation to other evidence. A particular piece of evidence, even if not sufficient by itself to establish an asserted fact or claim, may contribute to establishing that fact or claim when considered in conjunction with other pieces of evidence".)

concludes that NASA's R&D contracts with Boeing are not properly characterized as "purchases of services".

7.982 We begin with NASA's statutory basis for performing aeronautical research, which is found in the *National Aeronautics and Space Act of 1958*.[2474] The Space Act provides that:

> "(d) The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:
>
> (1) The expansion of human knowledge of the Earth and of phenomena in the atmosphere and space;
>
> (2) *The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles*;
>
> (3) The development and operation of vehicles capable of carrying instruments, equipment, supplies, and living organisms through space;
>
> (4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes;
>
> (5) *The preservation of the role of the United States as a leader in aeronautical and space science and technology* and in the application thereof to the conduct of peaceful activities within and outside the atmosphere;
>
> (6) The making available to agencies directly concerned with national defense of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency;
>
> (7) Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results thereof;
>
> (8) The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities, and equipment;
>
> (9) *The preservation of the United States preeminent position in aeronautics and space through research and technology development related to associated manufacturing processes."*[2475]

7.983 We note that Sec. 203(a) of the *Space Act* provides that NASA must, in order to carry out the objectives of the *Space Act*, "provide for the widest practicable and *appropriate* dissemination of information concerning its activities and the results thereof".

[2474] National Aeronautics and Space Act of 1958, Pub. L. No. 85-568, as amended, Exhibit EC-286 (emphasis added).

[2475] National Aeronautics and Space Act of 1958, Pub. L. No. 85-568, as amended, Exhibit EC-286 (emphasis added).

BCI deleted, as indicated **[***]**

7.984 We now turn to an examination of the *types of instruments* entered into between NASA and Boeing. In the case of NASA aeronautics R&D, we consider that NASA's decision to provide payments and access to facilities to Boeing through "procurement contracts" rather than "assistance instruments" does not shed very much light on the nature of the transactions. Our reasoning on this issue is as follows. NASA considers that a "direct benefit or use" to NASA exists when it initially drafts a scope of the work to advance research under one of its programmes and defines the delivery of the end products. In the case of the procurement contracts awarded to Boeing at issue in this dispute, the research under the contract advanced one of NASA's research programmes and NASA determined particular work that it needed, so it solicited proposals under a request for proposals, and awarded contracts.[2476] Thus, the United States explains that NASA considers R&D to have "direct benefit or use" for NASA where that R&D "advances research under one of its programmes". Likewise, NASA considers R&D conducted pursuant to a Space Act Agreement to be of "benefit" to NASA where that R&D advances its "program requirements and objectives".

7.985 We turn now to the question of whether NASA has any demonstrable use for the R&D performed under the eight aeronautics programmes at issue. Based on the Panel's review of all of the evidence before it, it appears that a principal purpose of NASA's aeronautics R&D in general, and of the eight aeronautics programmes at issue, is to transfer technology to U.S. industry with a view to improving U.S. competitiveness vis-à-vis foreign competitors.

7.986 In a 1992 congressional meeting on Federal Support for U.S. Aeronautics Industry, NASA's Richard Petersen, Associate Administrator of Office of Aeronautics, Exploration and Technology, stated that:

> "The current *U.S. leadership* in aeronautics has not happened by accident. It is the result of a successful industry and government partnership that has evolved since the founding of the NACA, over 77 years ago. In this partnership, there is a shared responsibility between NASA, Industry, DOD and FAA for technology development and in *securing U.S. leadership*. NASA plays a central role in developing and *transferring technology*, a responsibility we take very seriously."[2477]

7.987 In a statement to a Senate subcommittee in 2001, Daniel Goldin, former Administrator of NASA, explained that past NASA research is already incorporated into Boeing planes and that NASA's partnership with Boeing will continue well into the future:

> "{I}f the Europeans are going to make small, marginal improvements with what we're saying here, we'll whip them. Money is not the magic ingredient. The partnership is. It is absolutely clear. We have been talking to Boeing and working with Boeing and I think it's important you talk to the Boeing representative David Swain here today. We've been talking to Pratt & Whitney and GE, who are the backbone of our commercial aviation. They don't want us to do the near-term things that will impact the next five years. The die is cast for the next five years. The things we have already done are into their products and we're now looking, what can we do now for a decade from now. ... {I}n talking to Pratt & Whitney, GE and Boeing, looking at a futuristic program like that {i.e. the HSR Program} where the government does the high-risk, high-payoff research and then transitions it to industry, they say that they're interested. ... With Boeing, we need to look at new ways of building wings, new

[2476] United States' response to question 151(a), para. 137.

[2477] Federal Support for U.S. Aeronautics Industry: Hearing before the House Subcomm. on Government Activities and Transportation of the Comm. on Government Operations, 102nd Cong. (1992) (statement of Richard Petersen, Associate Administrator, Office of Aeronautics, Exploration and Technology, NASA), Exhibit EC-326, p. 182 (emphasis added).

> tools so they can get the cycle time by a factor of two, down by a factor of two. The cycle time is too long for building planes."[2478]

7.988 In a 1993 Senate hearing, Mr. Goldin stated that:

> "As global competition increases, we will have to improve our ability to assist industry to commercialize technology. *We are all painfully aware that Airbus beat us to the punch* in commercializing, among other advanced technologies, fly-by-wire controls, a technology invented in the United States by NASA and DOD. *To prevent this kind of occurrence in the future*, we are now working harder at developing and validating new technologies for industry to commercialize, and *we intend to do it faster, better, and cheaper than our competitors*. NASA's Aeronautics Program can contribute by ensuring that commercialization by industry is an integral part of program planning from the very beginning, accomplished in cooperation with our partners. This is a change from the way we have done business in recent years – a much needed change – and exactly the tack we are taking."[2479]

In response to written questions, Administrator Goldin stated:

> *Question 1*. Do you believe that *American manufacturers* are behind Airbus in terms of technology?
> Answer. ... The principal shortfall in *U.S. technology development* has been insufficient validation and risk reduction to allow *U.S. manufacturers* to take full and early advantage of technology availability. The proposed NASA aeronautics enhancements for FY 1994 focus on cooperation with industry through the technology validation phase.
>
> ...
>
> *Question 3*. You have discussed the importance of NASA's aeronautics research programs to the aircraft manufacturing industry. What steps has NASA taken to ensure that technology development under these programs is effectively transferred to industry? How does NASA ensure that *American manufacturers* have access to these technologies before *foreign companies*?
> Answer. NASA generally performs its research in cooperation with the aeronautics industry, thereby providing some direct mechanisms for technology transfer. However, we are stepping up our efforts to increase and improve industry involvement both in planning and implementing our programs. Additionally, much of the Aeronautics investment, beginning in FY 1994, is aimed at developing technologies to a more advanced stage, reducing the risks sufficiently for industry commercialization. Industry's partnership in the NASA program should allow manufacturers to easily continue the technology development through commercialization, as desired. Furthermore, the natural advantage *U.S. industry* is afforded through direct partnership in the NASA technology development program will be supported by NASA contracts and cooperative agreements *which include*

[2478] NASA's Aeronautics Program: Hearing before the Senate Subcomm. on Science, Technology and Space of the Comm. on Commerce, Science and Transportation, 107th Cong. (2001), FDCH Political Transcripts, 24 April 2001, Exhibit EC-292, pp. 13-18.

[2479] Competitiveness of the Aerospace Industry: Hearing on S. 419 Before the Senate Comm. on Commerce, Science, and Transportation, 103rd Cong. 81 (1993), Exhibit EC-1365, p. 34 (emphasis added).

> *provisions to protect commercially valuable and/or sensitive technology from premature foreign dissemination*."[2480]

7.989 In a 1994 hearing, Wesley L. Harris, NASA Associate Administrator for Aeronautics, stated that:

> "NASA's objective in the Advanced Subsonic Technology (AST) program is to *provide U.S. industry with a competitive edge to recapture market share*, maintain a strongly *positive balance of trade*, and *increase U.S. jobs*. The program has been planned and is being implemented in close coordination with *U.S. industry* and the Federal Aviation Administration (FAA) to address critical technology needs for a new generation of *superior U.S. subsonic aircraft* and engines, an efficient global air transportation system, and an expanded role for advanced short-haul aircraft in the civil transportation system."[2481]

Mr. Harris went on to state that:

> "Also funded from our R&T base is the research we conduct with high performance aircraft, which supports both military and civil applications. In FY 1993, we demonstrated the use of throttles only for flight control by landing our F- 1 5 aircraft with a specially designed propulsion control system. The NASA research team was honored for this Propulsion Controlled Aircraft (PCA) project by Popular Science magazine with a "Best of What's New' Award. The technology is now being extended to civil transport aircraft. This is *an example of how we have worked with our DoD partners to transfer technologies developed from our integrated flight and propulsion controls research to our commercial customers*, which improves safety *and makes them more competitive*. ... the R&T Base supports our unique national aeronautics research facilities which include wind tunnels, simulators, computational capability and research aircraft. These provide strong tools for aeronautics research and help increase *the U.S. aerospace industry's competitiveness*."[2482]

7.990 1n 1996, NASA Langley Center Director Paul Holloway stated that "{i}t is really important to us at Langley when *a customer like the Boeing Company uses and appreciates our technology*. This is the *reason for our existence*".[2483] Along the same lines, in 1998, Langley Director Dr. J.F. Creedon stated that:

> "*The reason that there is a NASA Langley and the other aeronautics centers is to contribute technology to assure the pre-eminence of US aeronautics*. When Boeing brings out a flagship product like the 777, that uses as many products of NASA technology as are on this plane, it reaffirms *the reason that we exist* and it is very gratifying to us."[2484]

[2480] Competitiveness of the Aerospace Industry: Hearing on S. 419 Before the Senate Comm. on Commerce, Science, and Transportation, 103rd Cong. 81 (1993), Exhibit EC-273, pp. 80-81 (emphasis added).

[2481] Statement of Wesley L. Harris, NASA Associate Administrator for Aeronautics, before the House Subcommittee on Technology, Environment, and Aviation, 10 February 1994, Exhibit EC-359, p. 4 (emphasis added).

[2482] Ibid., pp. 8-9 (emphasis added).

[2483] NASA News Release No. 96-33, "Boeing says 'thanks' with visit of innovative 777 airliner to NASA Langley," 8 May 1996, Exhibit EC-1362 (emphasis added).

[2484] Video clip of Langley Director Dr. J.F. Creedon on visit of Boeing 777, Langley Research Center, LV-1998-00023, Exhibit EC-287 (emphasis added).

BCI deleted, as indicated **[***]**

7.991 At a 2005 hearing, Dr. J. Victor Lebacqz, NASA Associate Administrator for Aeronautics Research, stated that:

> "{t}he revolutionary technologies developed by NASA within the next decade will form the basis for a new generation of environmentally friendly aircraft and will enhance *U.S. competitiveness* 20 years from now."[2485]

7.992 The evidence contains similar statements from senior Boeing officials. For example, in a 1994 hearing, Robert Spitzer, Vice President of Technology with BCA, explained that:

> "The NASA aeronautics role is different from the space role within NASA where they are the customer and industry is the supplier. In the commercial aeronautics the *manufacturer of airplanes is the customer and NASA is the supplier*."[2486]

7.993 A 1994 NASA document entitled *Achieving Aeronautics Leadership, NASA Aeronautics Strategic Enterprise Plan, 1995-2000*[2487] states that the "Aeronautics Industry" is one of its main "customers" (along with DOD, FAA, the academic community, and non-aerospace industries). The document defines "customers" as "entities that require NASA-developed technologies, facilities, and/or technical expertise to enhance the economic competitiveness, military security, and air transportation infrastructure of the United States".[2488] It goes on to state that while each of NASA's "customer segments" is facing its own challenges, there are several factors which have severely affected the "industry" (i.e. the "industry" that is NASA's "customer") as a whole, including the following:

> "*Foreign Competition*. During the same period in which domestic producers have been facing this "profit squeeze" between cost-conscious customers and escalating production costs, foreign competition, often subsidized by their host governments, has captured *a large share of previously U.S. dominated markets*. For example, *U.S. manufacturers* held 80 percent of the large commercial transport market in 1974, but only 68 percent in 1993. And in 1994, for the first time ever, Europe's Airbus Industrie consortium posted more new orders than did Boeing. Similar losses are working their way through the lower-tier supplier industries. Although subsequent trade negotiations have been addressing this situation, concerns still remain about future foreign support in aircraft development and production."[2489]

The document goes on to state that NASA will:

> "Emphasize Technology Transfer. The Aeronautic Enterprise has long recognized the importance of ensuring that our customers actually use the products that we develop. The Enterprise will continue *to emphasize technology transfer to the aerospace community through joint program planning and execution*, and to all U.S. industry through proactive commercial technology utilization outreach efforts. *The*

[2485] Statement of Dr. J. Victor Lebacqz, NASA Associate Administrator for Aeronautics Research, before the House Subcommittee on Space and Aeronautics, 16 March 2005, Exhibit EC-289, pp. 2-3 (emphasis added).

[2486] Hearing Before the Subcommittee on Technology, Environment and Aviation of the Committee on Science, Space, and Technology, US House of Representatives, 10 February 1994, Exhibit EC-1363, p. 128 (emphasis added).

[2487] NASA, Achieving Aeronautics Leadership, NASA Aeronautics Strategic Enterprise Plan, 1995-2000, Exhibit EC-302 (emphasis added).

[2488] Ibid., p. 11.

[2489] Ibid., p. 12 (emphasis added).

BCI deleted, as indicated **[***]**

> *Enterprise will also continue to protect sensitive research and technology as appropriate."*

7.994 A 1991 study prepared by the Office of Technology Assessment, a research entity of the US Congress, states that:

> "NASA's aeronautics R&D program also benefits *U.S. aircraft producers*, though it does not *always* bestow a competitive advantage. The program helps *U.S. aircraft manufacturers* develop and adopt new technologies by conducting research inhouse and then transferring the results to companies and by contracting with companies to perform specific research tasks, usually in cooperation with inhouse NASA research. Further, NASA researchers act as a free consulting service for industry engineers having technical problems. The availability of technologies developed and tested at NASA's expense and risk helps aircraft manufacturers incorporate new capabilities into their products at diminished cost or risk, just as military developments do."[2490]

7.995 A 1997 report by the Congressional Budget Office states that:

> "The National Aeronautics and Space Administration (NASA) funds the development of technology and systems intended for use in commercial airliners—both subsonic and supersonic--*with the explicit objective of preserving the U.S. share of the current and future world airliner market*. ... NASA justifies the supersonic part of its aeronautical research and technology program the same way it justifies the program's subsonic component: the agency needs to support *U.S. businesses* that produce large commercial aircraft for the world market. ... Although a case can be made for federal support of R&D that ultimately benefits private businesses and is consistent with an economically efficient allocation of resources, it applies only weakly, or not at all, to the production of large aircraft. The benefits from the R&D supported by the NASA programs in question {the AST and HSR programs} fall almost exclusively to aircraft manufacturers, their suppliers, and airlines." [2491]

7.996 In 2003, Langley catalogued some of the contributions it had made to US large civil aircraft in a publication entitled *Concept to Reality: Contributions of the NASA Langley Research Center to the US Civil Aircraft of the 1990's*. This publication states that:

> "A high priority is placed by NASA on the rapid, timely dissemination of information to *appropriate U.S. organizations*, while being extremely sensitive to proprietary interests and the protection of technology and critical intellectual property. … Numerous NASA focused programs for civil aircraft have emerged and delivered unprecedented opportunities for the maturation of key technologies to *the U.S. airframe, propulsion, and avionics and flight controls industries* for the design of advanced aircraft."[2492]

This same publication states that Boeing "flew the first 777 to Langley for a 'thank you' visit" as "a gesture of thanks for NASA's technology contributions to its creation".[2493] According to this

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[2490] Office of Technology Assessment of the Congress of the United States, Competing Economies: America, Europe, and the Pacific Rim, Chapter 8 (selections): Government Support of the Large Commercial Aircraft Industries of Japan, Europe, and the United States, 1991, Exhibit EC-306, p. 347 (emphasis added).

[2491] Congressional Budget Office, Reducing the Deficit: Spending and Revenue Options, March 1997, Exhibit EC-307, pp. 152-153 (emphasis added).

[2492] Joseph R. Chambers, Concept to Reality: Contributions of the NASA Langley Research Center to U.S. Civil Aircraft of the 1990s (2003), Exhibit EC-293, p. 1 (emphasis added).

[2493] Ibid., pp. 166-167.

publication, Langley research contributed to several advances in aerodynamics, flight dynamics, structures and materials, flight systems, noise reduction, and operating problems.[2494]

7.997 A 2003 Langley *Economic Impact Report* highlights numerous contributions made by Langley to aircraft design.[2495] This report states, in a section entitled "Direct Impact of NASA Langley on Government and *U.S. Industry*", that:

> "Within the manufacturing sector, aerospace is the only industry with a positive contribution to the *U.S. balance of trade*. It provides a net annual contribution of more than $21 billion. However, *the U.S. faces strong competition*. Prior to 1974, the U.S. had more than 90 percent of the commercial transport market share. Today, the U.S. share is around 60 percent. To preserve our nation's economic health and the welfare of the traveling public, *NASA has set bold research objectives and goals to sustain U.S. leadership* in aeronautics and space. NASA Langley's leadership and technology advancements in aviation safety, advanced subsonic technology, airframe systems and high-speed research play a pivotal role in accomplishing these goals."[2496]

7.998 A 1994 NASA "Facts Online" publication entitled "NASA's B-737 Flying Laboratory" catalogues a number of "Advanced Technologies Tranferred *To U.S. Industry*".[2497] It proceeds to discuss "Technology Transfer Lessons":

> "Gone are the days when successful technology transfer is as simple as writing a report on research results after the work is completed. There is a growing consensus ... that technology transfer efforts stand a much better chance of success if they occur as a part of the technology development process, through personal contact between NASA and industry engineers. By involving industry earlier in the process, NASA Langley B-737 program managers have helped insure that their efforts are relevant to industry's needs. Also, flight testing new concepts on the airplane has provided unassailable proof that the technology will work."[2498]

7.999 The ACT Program Budget states that:

> "*The goal of the Advanced Composites Technology (ACT) program is to increase the competitiveness of the U.S. aeronautics industry by putting the commercial transport manufacturers* in a position to expand the application of composites beyond the secondary structures in use today to wings and fuselages by the end of this decade. Industry's resistance to using composites is one of economics. While the current demonstrated level of composites technology can promise improved aircraft performance and lower operating costs through reduced structural weight, it does so with increased manufacturing costs, currently twice the cost of aluminum. The goal of this program is to verify composite structure designs that will have acquisition costs 20-25% less and weigh 30-50% less than an aluminum aircraft sized for the same payload and mission."[2499]

[2494] Ibid., pp. 249-258.
[2495] NASA Langley Research Center, Economic Impact, Fiscal Year 1998, Exhibit EC-303, p. 17.
[2496] Ibid., p. 16 (emphasis added).
[2497] NASA Facts Online, "NASA's B-737 Flying Laboratory," May 1994, Exhibit EC-1389, pp. 1-3 (emphasis added).
[2498] Ibid., pp. 4-5.
[2499] NASA ACT Budget Estimates, FY 1989-FY 1997, Exhibit EC-321, FY 1997, SAT 4-21 (emphasis added).

BCI deleted, as indicated **[***]**

7.1000 NASA Contract NAS1-20546, funded under NASA's ACT Program, states that:

> "The objectives of this contract are to perform design, analysis, fabrication and testing verification of a full-scale composite wing structure *for commercial transport aircraft. The contract results are expected to provide the technical data required for the application of composite wing structures in new 21st Century commercial transport aircraft*."[2500]

This contract goes on to require that the Contractor, in that case MD, directly transfer the new manufacturing technology "to other *U.S. aircraft builders*".[2501]

7.1001 Certain contracts between NASA and Boeing under the ACT Program contained a "For Early Domestic Dissemination" (FEDD) clause, stating that:

> "It has been determined that performance under this contract may result in the generation of data having *significant commercial potential*. In recognition of this agency's *policy of enhancing the opportunities for U.S. economic benefits by providing for early dissemination of such data in the US Government and U.S. domestic industry prior to general publication* … It is agreed that the Contractor will not grant permission to publish this data or release said data to foreign parties, or transfer this information to foreign parties, or associates in any form without prior concurrence of the Contracting Officer …. Information for general release will be two (2) years from publication date indicated on the document."[2502]

7.1002 Space Act Agreements entered into between NASA and Boeing under the ACT Program state that:

> "The NASA Program has been structured around definitions of success for the *commercial industry* .... {M}any of the deliverables from the NASA program will directly benefit *Boeing*."[2503]

> "The principal technical objectives of the program {include}: … {t}ransfer the technology to *U.S. industry* through technology transfer workshops...."[2504]

> "*NASA has a goal under its Advanced Composites Technology (ACT) program to help establish United States leadership in this field*. Toward this goal, MDC and NASA LaRC agree to coordinate {their} two programs to develop and demonstrate engineering and manufacturing readiness for composite wing structure on new commercial transports."[2505]

7.1003 A NASA technical report prepared under the ACT Program states:

[2500] NASA Contract NAS1-20546 with McDonnell Douglas regarding Technology Verification of Composite Primary Wing Structures for Commercial Transport Aircraft, 18 September 1995, Exhibit EC-324, p. 3 (emphasis added).

[2501] Ibid. (emphasis added).

[2502] See e.g. NASA Contract NAS1-18862 with McDonnell Douglas Corporation regarding Innovative Composite Aircraft Primary Structures (ICAPS), 31 March 1989, Exhibit EC-331, Article H-6 (emphasis added).

[2503] SAA 214: Aging Aircraft Research and Technology Development, Exhibit US-500, Article 4.0 (emphasis added)

[2504] SAA 288: Aging Aircraft Research and Technology Development, Exhibit US-501, Article 3.0 (emphasis added)

[2505] SAA 331: Composite Wing Structure Research, Exhibit US-503, Article 1.0 (emphasis added).

BCI deleted, as indicated **[***]**

> "The timely development of advanced composite technologies for wing and fuselage structures will ensure that *U.S. manufacturers maintain a majority share of the world market for transport aircraft*. The US government currently finances such developments under the NASA funded Advanced Composite Technology (ACT) program. Developmental funding such as ACT is *crucial to the future of the U.S. aircraft industry* and, since a large number of commercial aircraft manufactured in the U.S. are sold abroad, provides long term national benefits. …
>
> *World dominance in transport aircraft sales by US industry is threatened by foreign competitors* {…}
>
> Boeing has remained the only US aircraft manufacturer to meet the Airbus challenge without loss of market share. US government research funding, such as the NASA ACT program, helps *Boeing and other US aircraft manufacturers* develop advanced technology and remain competitive in world markets."[2506]

7.1004 NASA also explained that "{t}he program will help accomplish one of NASA's new technology goals for aeronautics – to reduce the costs of air travel by 25 percent within 10 years, and by 50 percent within 20 years".[2507]

7.1005 The HSR Program Budget states that:

> "The HSR program continues to develop technologies to establish the viability of an economical and environmentally sound High Speed Civil Transport (HSCT), a vehicle that - *if built by U. S. industry - could provide U. S. leadership in the long-range commercial air travel markets of the next century*, offering returns of billions of dollars in sales and numerous high-quality jobs for the *U.S. workers*. In FY 1999, NASA has proposed an extension to the program, HSR Phase IIA, which will mitigate risk in two critical areas-propulsion and airframe materials and structures. HSR Phase IIA will enable American taxpayers to continue to receive a return on their investment in high-speed research and will be essential to *enabling U. S. industry* to make its decisions on whether the 21st Century commercial aircraft market will call for an HSCT."[2508]

7.1006 NASA's HSR Program was a focused technology development programme intended to enable development of a high-speed (i.e. supersonic) civil transport ("HSCT").[2509] The programme proceeded in two phases, with Phase I commencing in 1990 and Phase II commencing in 1994.[2510] Phase II of the programme was directed at "addressing *essential technologies needed by the U.S. aeronautics industry* in order to make informed decisions regarding future HSCT development and production".[2511]

[2506] L. Ilcewicz, et al., Advanced Technology Composite Fuselage, printed in Sixth NASA/DOD ACT Conference, Exhibit EC-279, pp. 21, 22, 76, and 98 (emphasis added).

[2507] NASA Facts Online, "The Advanced Stitching Machine: Making Composite Wing Structures of the Future", Exhibit EC-336, p. 2.

[2508] NASA HSR Budget Estimates, FY 1991-FY 2001, Exhibit EC-343, FY 1999, SAT 4.1-30 (emphasis added).

[2509] National Research Council, Committee on High Speed Research, U.S. Supersonic Commercial Aircraft: Assessing NASA's High Speed Research Program, 1997, Exhibit EC-319, p. 1.

[2510] NASA HSR Budget Estimates, FY 1991-FY 2001, Exhibit EC-343, FY 1994, RD 9-31 and RD 9-33.

[2511] NASA HSR Budget Estimates, FY 1991-FY 2001, Exhibit EC-343,FY 1994, RD 9-33.

BCI deleted, as indicated **[***]**

7.1007 The "Technology Transfer" *Handbook* for the HSR Program states the reason behind the "Limited Exclusive Rights Data" (LERD) clauses used in certain contracts: "{b}ecause it is critical for the *U.S. to maintain its lead over foreign competition in aerospace technology*, access to sensitive information … generated in this program will be restricted to the extent permitted by applicable Federal law".[2512] NASA further stated that "{o}pen dissemination of critical technology developed under this Program could severely impact the competitiveness of *the U.S. aeronautics industry*".[2513] The HSR Handbook states that:

> "The intent in the application of the controls to be described in this section is to control the transfer of sensitive information to *foreign competitors*."[2514]

7.1008 The HSR "*Program Plan*" states that:

> "The projected High-Speed Civil Transport (HSCT) market is substantial, and successful development and production of an HSCT by *foreign competitors* would significantly reduce the *U.S. aerospace industry* world market share of civil transport aircraft. Technology development is essential. The NASA HSR program is being conducted in two phases with the ultimate objective of helping to assure *U.S. industry's* continued preeminence in aeronautics well into the next century by developing technology that will enable an environmentally compatible and economically viable HSCT aircraft."[2515]

7.1009 A Space Act Agreement entered into between NASA and Boeing states:

> "Through this commitment each Party agrees to focus HSR and HSCT funding on the high-priority technologies required to develop a commercially viable supersonic transport."[2516]

7.1010 Other programme objectives included addressing "environmental issues and developing the basis for evaluating technology advances that can provide the necessary environmental compatibility"[2517], providing "as strong a technical basis as possible for establishing suitable {environmental} standards" for high speed flight[2518], to "understand better the potential environment effects" of high speed flight and carry out studies to "lead to environmental certification requirements for future high speed transports" and "working on ways to soften the sonic boom to ensure minimal or no harmful effects on human and animal life from its operation".[2519]

7.1011 The AST Program Budget states that:

> "The goal of NASA's Advanced Subsonic Technology (AST) Program is to develop, in cooperation with the Federal Aviation Administration (FAA) and *the United States*

[2512] NASA Langley Research Center, High-Speed Research Program: Technology Transfer Control Handbook, April 1998, Exhibit EC-344, p. 1 (emphasis added).

[2513] NASA Langley Research Center, High-Speed Research Program: Technology Transfer Control Handbook, April 1998, Exhibit EC-344, p. 17 (emphasis added).

[2514] Ibid. (emphasis added).

[2515] NASA High Speed Research Program Plan, April 1998, Exhibit EC-1208, p. 1 (emphasis added).

[2516] SAA 249: High Speed Technology Research, Exhibit US-502, Article 1.0; SAA 404: High Speed Technology Research, Exhibit US-506, Article 1.0.

[2517] NASA HSR Budget Estimates, FY 1991-FY 2001, Exhibit EC-343, FY 1991, RD 12-35; FY 1992, RD 12-22, FY 1993, RD 12-23.

[2518] NASA High Speed Research Program Plan, April 1998, Exhibit EC-1208, p. 4.

[2519] Statement of Daniel S. Goldin, Administrator, National Aeronautics and Space Administration, US Senate Committee on Commerce, Science, and Transportation, 19 May 1993, Exhibit EC-1365.

> *aeronautics industry*, high payoff technologies to enable a safe, highly productive global air transportation system that includes a new generation of environmentally compatible, economical *U.S. subsonic aircraft* that are *superior to foreign products*. To improve the *technological competitiveness of the U.S.,* the objective of the AST program is to accelerate subsonic technology development in several key areas in which the focus is on the economic value of the technologies to the airframe and engine manufacturers, airlines and FAA.
>
> *With competition from foreign competitors greatly increasing, technology is critically needed to help preserve the U.S. aeronautics industry market share*, jobs, and balance of trade. Exports in large commercial transports make a significant contribution to the U.S. balance of trade. However, according to industry estimates, the *U.S. world-wide market share* has slipped from a high of 91% during the 1960's to about 67% today."[2520]

7.1012 The objectives for the composites element of the AST Program were described as follows:

> "The aircraft industry's resistance to using composites is one of economics. While the current demonstrated level of composites technology can promise improved aircraft performance and lower operating costs through reduced structural weight, it does so with increased manufacturing costs, currently twice the cost of aluminum. The goals of the composites element are to reduce the weight of civil transports by 30-50% and their cost by 20-25% compared to today's metallic transports. This translates into a potential 16% direct operating cost-savings to the airlines and *increases the competitiveness of the U.S. built transports*. In cooperation with industry and the FAA, research is performed to validate the technology for the application of new composites manufacturing techniques, such as through-the-thickness stitching and resin transfer moulding, textile preforms and advanced fiber placement, on transport wings."[2521]

7.1013 The HPCC Program consisted of four components, one of which was the computational aerosciences project ("CAS"), the component most relevant to the aeronautics industry.[2522] The aim of the CAS project has been described variously as "to significantly shorten the design cycle time for advanced aerospace products such as future high-speed civil transports"[2523] and to "accelerate the development, availability and use of high-performance computing technology *by the U.S. aerospace industry*, and to hasten the emergence of a viable commercial market for hardware and software vendors *to exploit this lead*".[2524] In other words:

[2520] NASA AST Budget Estimates, FY 1992-FY 2001, Exhibit EC-357, FY 1996 (emphasis added).

[2521] NASA AST Budget Estimates, FY 1992-FY 2001, Exhibit EC-357, FY 1996, SAT4-38. In FY 1997, this objective was modified to recognize industry's concern not just with the comparative costs of composites, but also the robustness and reparability of composites. In addition, the weight and cost reduction targets were modified as follows: reduce the weight of civil transports by 10-30 per cent and their cost by 10-20 per cent, translating into a potential 5 per cent direct operating cost-savings to the airlines; NASA AST Budget Estimates, FY 1997, SAT4-37, Exhibit EC-357.

[2522] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15 (BCI), p. 122. The other components of HPCC were the Earth and Space Sciences project, the Information Infrastructure and Technology and Applications component, and the Remote Exploration and Experimentation project, Exhibit EC-372.

[2523] NASA HPCC Budget Estimates, FY 1992-FY 2003, Exhibit EC-373, FY 1996, SAT 4-18.

[2524] The National Aeronautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372, p. 3 (emphasis added).

BCI deleted, as indicated **[***]**

> "The CAS objectives are: to accelerate development and availability of high-performance computing technology of use to *the U.S. aerospace community*; to facilitate adoption and use of this technology by *the U.S. aerospace industry;* and to hasten emergence of a viable commercial market for hardware and software vendors to exploit this lead. CAS targets advances in aeroscience algorithms and applications, system software, and computing machinery that will enable more than 1000-fold increases in system performance early in the Twenty-first Century. These computational capabilities will be sufficiently characterized such that they can be rapidly integrated into economical design and development processes for use *by U.S. industry*. Although CAS does not develop production computing systems, CAS technology and the characterization of existing hardware and software will enable the development of full-scale systems by industry and will make commercial ventures into this area more attractive."[2525]

7.1014 Further, according to the HPCC Budget estimates:[2526]

> "CAS targets advances in aeroscience algorithms and applications, system software and machinery that will enable more than 1000-fold increases in system performance early in the twenty-first century. These computational capabilities will be sufficiently characterized such that they can be rapidly integrated into economical design and development processes *for use by the U.S. industry*. Although CAS does not develop production computing systems, CAS technology and the characterization of existing hardware and software will enable the development of full-scale systems by industry and will make commercial ventures into this area more attractive."

7.1015 The HPCC fact sheet provides:[2527]

> "*The U.S. aerospace industry can effectively respond to increased international competition* only by producing across-the-board better quality products at affordable prices. High performance computing capability is a key to the creation of a competitive advantage, by reducing product cost and design cycle times; its introduction into the design process is, however, a risk to a commercial company that NASA can help mitigate by performing this research. The CAS project catalyzes these developments in aerospace computing, while at the same time pointing out the future way to aerospace markets for domestic computer manufacturers."

7.1016 A Space Act Agreement between NASA and Boeing states that:

> "This effort will provide an excellent opportunity to transfer NASA HPCC technology to the *U.S. aerospace industry*."[2528]

7.1017 NASA's HPCC *Program Plan* states that the "principal industry customers" of the CAS project are "aerospace vehicle and engine manufacturers".[2529] It goes on to state that "NASA center management, working with industry and NASA HPCC researchers, are responsible for identifying

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[2525] NASA HPCC Budget Estimates, FY 1992-FY 2003, Exhibit EC-373, FY 2000, SAT 4.1-24 (emphasis added).

[2526] Ibid.

[2527] The National Aeronautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372, p. 3 (emphasis added).

[2528] NASA SAA2-B0001.3, Exhibit US-512, Article 1.2 (emphasis added).

[2529] NASA High Performance Computing and Communications Program Plan, 25 April 2000, Exhibit EC-1211, p. 14 (emphasis added).

sensitive technologies. These technologies are handled in such a way that their dissemination to *foreign* persons, companies, laboratories, and universities is restricted".[2530]

7.1018 The Aviation Safety Program, which commenced in FY 2000, funds the development of technologies that are intended to reduce aviation accident and fatality rates. The programme grew out of aviation safety research conducted under the R&T Base Program prior to FY 2000.[2531] The *Program Plan* for the Aviation Safety Program states that:

> "The NASA Office of Aero-Space Technology (OAT) Enterprise is focused on long-term, high-risk, high-payoff research and technology. The Enterprise seeks to promote economic growth and security and to *enhance U.S. economic competitiveness* through leadership in the global aircraft market by revolutionizing air travel and the way in which aircraft are designed, built, and operated and by providing low-cost space transportation technologies. ...
>
> NASA may use formal agreements to establish partnerships with the *U.S aviation industry*, FAA, DoD and other NASA Programs, such as the six R&T Base Programs and the Aviation System Capacity Programs. These agreements leverage existing programs within these organizations, as well as identify the means through which the technology can be realized *in U.S. industry production*. ...
>
> T*he Aviation Safety program will emphasize rapid and effective dissemination of the technology to the U.S. industry*. Technology transfer mechanisms depend on the maturity of the technology. A variety of technology transfer mechanisms will be employed. The most important is direct involvement of the Users in the formulation of the program described in this plan and direct contract of R&D. AvSP resources fund R&D contracts and grants, which help ensure direct transfer of technology *to the U.S. industry* and thus increase the likelihood of direct input into near-term products. Technology exchange will also occur among the participants through special technical working group meetings. Presentations at technical conferences sponsored by the American Institute of Aeronautics and Astronautics, American Society of Mechanical Engineers, and other similar professional societies will be limited to discussion of *non-competitively sensitive information*. Other methods of technology transfer include technical reports, cooperative programs, and personnel exchanges between NASA, industry and other government agencies through memoranda of agreement (MOA's), and technical demonstrations at NASA and user facilities."[2532]

7.1019 The QAT Program built upon the Noise Reduction portion of the AST Program, which according to NASA was "a focused technology program for developing noise reduction technology *for the US commercial aircraft industry to enhance its competitiveness* to meet national and international environmental requirements and to facilitate market growth".[2533] The QAT Program funded the development of technologies to reduce aircraft noise levels by a factor of two within 10 years, by a factor of four within 25 years, and to create a transportation system "with no need for

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[2530] NASA High Performance Computing and Communications Program Plan, 25 April 2000, Exhibit EC-1211, p. 48 (emphasis added).

[2531] NASA Aviation Safety Budget Estimates, FY 2000-FY 2007, Exhibit EC-382, FY 2000, SAT 4.1-49.

[2532] NASA Aviation Safety Program Plan, 1 August 1999, Exhibit EC-1209, pp. 2, 4 and 35 (emphasis added).

[2533] NASA Memorandum to Research and Focused Programs Contracts Branch, 23 May 1996, Exhibit EC-365, p. 4 (emphases added).

curfews, noise budgets, or noise abatement procedures."[2534] NASA described the goal of the QAT Program as follows:

> "The goal of the Quiet Aircraft Technology program is to contribute to the 10-year noise objective of the Global Civil Aviation enabling technology goals, as stated in the Office of Aero-Space Technology Enterprise Strategic Plan, 'Reduce the perceived noise levels of future aircraft by a factor of two from today's subsonic aircraft within ten years, and by a factor of four within 25 years.' The Quiet Aircraft Technology program is the next step in achieving the very ambitious and desirable 25-year goal for the public good. Achievement of the 25-year goal will fulfill NASA's vision of a noise constraint-free air transportation system with the objectionable aircraft noise contained within the airport boundaries. Part of this vision is a transportation system with no need for curfews, noise budgets, or noise abatement procedures. Benefits to the public of achieving these goals include increased quality of life, readily available and affordable air travel, and *continued U.S. global leadership*."[2535]

7.1020 NASA also formulated the objectives of the QAT Program in terms of "fulfull{ing} NASA's vision of a noise constraint-free air transport system with objectionable noise contained within airport boundaries" and leading "the technology development necessary to meet national community noise impact reduction requirements"[2536], and developing "technology that, when implemented, reduce the impact of aircraft noise to benefit airport neighbors, the aviation industry, and travellers".[2537]

7.1021 The VSP, which began as a separate programme in FY 2003 based on components from the QAT and R&T Base Programs, focuses on "the development of key enabling technologies to enable capabilities for future air vehicles".[2538] In particular, it is "developing enabling technologies to expand the availability of air travel that will satisfy the public's demand for increased air travel without affecting safety or degrading the environment".[2539] NASA has described the goal of this programme as follows:

> "*U.S. competitors* are targeting aviation leadership as a stated strategic goal. Without careful planning and investment in new technologies, near- term gridlock, constrained mobility, unrealized economic growth, and the continued erosion of U.S. aviation leadership could result. ... Breakthrough Vehicle Technologies investigates and develops breakthrough technologies *to maintain the superiority of U.S. aircraft*, to ensure the long-term environmental compatibility of aircraft systems, and to improve their safety and efficiency." [2540]

[2534] NASA QAT Budget Estimates, FY 2001-FY 2007, Exhibit EC-384, FY 2002, SAT 4.1-74.

[2535] NASA QAT Budget Estimates, FY 2001-FY 2007, Exhibit EC-384, FY 2001, p. 4/55 (emphasis added).

[2536] NASA QAT Budget Estimates, FY 2001-FY 2007, Exhibit EC-384, FY 2001 and FY 2002, SAT 4.1-74.

[2537] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2003, SAT 4-24.

[2538] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2005, ESA 16-16.

[2539] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2005, ESA 16-16.

[2540] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2003, SAT 4-23 (emphasis added).

BCI deleted, as indicated **[***]**

7.1022 NASA also formulated the objectives of the VSP in terms of ensuring the "long-term environmental compatibility of aircraft systems, and to improve their safety and efficiency",[2541] as research that would "focus on embryonic technologies to further increase the quality of life for our citizens"[2542], and demonstrations of "breakthrough of aeronautics technologies for protecting the Earth's environment and enabling science missions".[2543]

7.1023 The R&T Base Program Budget states that:

> "The aerodynamics research and technology program: ... Is advancing the understanding of fundamental fluid mechanics and aero acoustics phenomena and providing new, validated aerodynamics technology applicable to future U.S. military and civil aircraft from subsonic to hypersonic speeds. ...
>
> Through basic and applied research in partnership with industry, academia, and other government agencies, *NASA develops critical high-risk technologies and advanced concepts for U.S. aircraft and engine industries*. ...
>
> These efforts provide the enabling technology that ultimately leads to future focused technology programs and advanced systems development *by U.S. industry*. The majority of the research is captured in the principal aeronautics disciplines of aerodynamics, propulsion, materials, structures, controls and guidance, human factors, and flight systems. A significant portion of the base program is performed in cooperative agreements with the aerospace industry and other Government agencies *to facilitate rapid technology transfer*. ...
>
> The program seeks to provide the technology which, *when applied by the U.S. aerospace industry*, will enable the development of economical, safe quiet globally competitive aircraft for all speed ranges. Further, the program includes the development of multidisciplinary methodologies to enable *the U. S. industry* to reduce design cycle time and cost in the development of future aircraft. The primary objective of the program is to provide the fundamental viscous aerodynamic expertise and facilities to meet the ongoing and future design requirements of the U.S. industry, the NASA, the DoD, the FAA, and other Government agencies. ...
>
> In FY 1994, a computer code for designing and analyzing thermal ice protection systems will be made available to U.S. industry, a joint NASA / FAA / Industry Program to address the problem of ice-induced tail plane stalls will be initiated, and a joint NASA/Industry Program to develop requirements for ice protection for Hybrid Laminar Flow Control (HLFC) systems will be initiated. ...
>
> The associated design databases, and design methods are effectively transferred to industry and DoD for the development of safe and *superior U.S. civil and military aircraft*. ...

[2541] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2003, SAT 4-23.

[2542] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2004, SAE 15-19 and FY 2005, ESA 16-16.

[2543] NASA Vehicle Systems Budget Estimates, FY 2003-FY 2007, Exhibit EC-396, FY 2006, SAE 11-14.

> Each element of the R&T Base Program has an objective to develop methods that will contribute to the *U.S. aerospace industry* goal of reducing design cycle time by at least 50%."[2544]

7.1024 The Panel has also examined the allocation of intellectual property rights under the R&D contracts between NASA and Boeing. The allocation of intellectual property rights under a number of NASA's R&D contracts with Boeing, in particular with respect to data rights (as opposed to patent rights) differed from the standard data rights clauses in U.S. government R&D procurement contracts. Boeing, as the contractor, retained rights to any inventions (i.e. patent rights) that it conceived of in the course of performing research funded by NASA; however the U.S. Government receives a royalty-free, "government use/purpose" license to use the subject invention. Boeing as the contractor also retained rights to use any data (i.e. data rights) that it produced in the course of performing research funded by NASA; however, the U.S. Government receives a royalty-free, "unlimited rights" license to use any data produced by the contractor in the course of performing research funded by NASA. Boeing was not required to pay any royalties to NASA for any resulting commercial rewards. Under some of the R&D programmes at issue, however, NASA included "Limited Exclusive Data Rights" (LERD) clauses in its R&D contracts with Boeing. The clauses limited the otherwise "unlimited rights" that the U.S. Government would normally have in the data developed in the course of the contracted research. The LERD clauses granted Boeing exclusive rights to exploit critical technologies developed under certain NASA contracts for at least five years from the date the data was reported. Technologies were categorized as "sensitive" and protected through LERD restrictions if they were considered to affect the competitive position of US industry.[2545] The NASA R&D contracts that contained LERD clauses involved "joint funding situation{s}", i.e. contractors were "contributing a significant amount of their own resources to contract research efforts". In a statement to a Senate subcommittee in 2001, Daniel Goldin, former Administrator of NASA, explained a link between the allocation of intellectual property rights and objectives NASA was pursuing under the programmes at issue:

> *Question 1*. Do you believe that *American manufacturers* are behind Airbus in terms of technology?
> Answer. ... The principal shortfall in *U.S. technology development* has been insufficient validation and risk reduction to allow *U.S. manufacturers* to take full and early advantage of technology availability. The proposed NASA aeronautics enhancements for FY 1994 focus on cooperation with industry through the technology validation phase.
>
> ...

[2544] NASA R&T Base Budget Estimates, FY 1991-FY 2004, Exhibit EC-398, FY 1992, 1995, 1999 (emphasis added).

[2545] European Communities' first written submission, para. 838 (citing NASA Langley Research Center, High-Speed Research Program: Technology Transfer Control Handbook, April 1998, Exhibit EC-344, p. 17; Advanced Subsonic Technology Program, Technology Transfer Control Handbook, August 1998, Exhibit EC-370, p. 18). These LERD and other data rights provisions have appeared in several NASA contracts with Boeing. See, e.g. NASA Contract NAS1-20267 with Boeing Commercial Airplane Group regarding Integrated Wing Design, 12 September 1994, Exhibit EC-360, pp. 11-19; NASA Contract NAS1-20268 with McDonnell Douglas regarding Integrated Wing Design, 12 September 1994, Exhibit EC-361, pp. 11-17. NASA's R&D solicitations have also advertised to potential contractors that data produced under the project would be protected by LERD and other data rights provisions. See e.g. NASA Final Solicitation 1-063-DIG.1299, Flight Critical Systems Research, 27 August 1999, Exhibit EC-588, at I-7 to I-10; NASA Solicitation 1-49-3400.0408, High Speed Research Program Systems Studies, 11 June 1990, Exhibit EC-589, pp. 8-10 and 26-36; NASA Solicitation 1-50-0140.0001, High-Speed Research Airframe Technology, 11 August 1993, Exhibit EC-570, pp. 34-41.

> *Question 3*. You have discussed the importance of NASA's aeronautics research programs to the aircraft manufacturing industry. What steps has NASA taken to ensure that technology development under these programs is effectively transferred to industry? How does NASA ensure that *American manufacturers* have access to these technologies before *foreign companies*?
>
> Answer. NASA generally performs its research in cooperation with the aeronautics industry, thereby providing some direct mechanisms for technology transfer. However, we are stepping up our efforts to increase and improve industry involvement both in planning and implementing our programs. Additionally, much of the Aeronautics investment, beginning in FY 1994, is aimed at developing technologies to a more advanced stage, reducing the risks sufficiently for industry commercialization. Industry's partnership in the NASA program should allow manufacturers to easily continue the technology development through commercialization, as desired. Furthermore, the natural advantage *U.S. industry* is afforded through direct partnership in the NASA technology development program will be supported by NASA contracts and cooperative agreements *which include provisions to protect commercially valuable and/or sensitive technology from premature foreign dissemination*."[2546]

7.1025 Although the United States does not assert that NASA's Space Act Agreements with Boeing constitute "purchases of services", we note that a number of these agreements contained provisions "to maintain any data that was generated in confidence for at least 2 to 5 years".[2547]

7.1026 Another relevant consideration is whether the transactions at issue involve the typical elements of a purchase of services. In this regard, we observe that a number of the R&D procurement contracts between NASA and Boeing provide that Boeing would receive no fee or profit.[2548] Under the "no fee" contracts, Boeing received no fee/profit for the R&D that it performed, because of NASA's determination that Boeing stood to benefit commercially from the R&D that it performed under the contract. For example, the selection statement for one of the R&D contracts at issue indicates that the fee provisions were deleted from the proposed procurement "based on a determination by the NASA Administrator that the benefits {are} to be derived by the U.S. aerospace industry".[2549] Documents related to another R&D contract between NASA and Boeing indicate that there would be no fee because "Boeing stands to benefit commercially from efforts conducted as a result of the proposed contract".[2550]

[2546] Competitiveness of the Aerospace Industry: Hearing on S. 419 Before the Senate Comm. on Commerce, Science, and Transportation, 103rd Cong. 81 (1993), Exhibit EC-273, pp. 80-81 (emphasis added).

[2547] European Communities' second written submission, para. 396, citing SAA 331: Composite Wing Structure Research, Exhibit US-503, Article 5.3; SAA 401: CADDRAD II Developments, Exhibit US-505, Article 5.3; SAA 404: High Speed Technology Research, Exhibit US-506, Article 5.3; SAA 1-506: Advanced Methodologies for Aerospace Analysis and Optimization, Exhibit US-508, Article 5.4; SAA 2-B0001.3: Advanced Aeroelastic Design Procedures, Exhibit US-512, Article 7.7; SAA 469: Study of High Reynolds Number Aerodynamics and Ground-to-Flight Scaling for Aerospace Vehicles, Exhibit US-521 (BCI), Article 5.3.

[2548] Based on our own review of 16 R&D contracts between NASA and Boeing that the European Communities submitted in its first written submission, it appears that nine of the R&D contracts involved a payment of a fee, and that seven of the contracts were "no fee" procurement contracts.

[2549] Selection Statement, Phase II High-Speed Research Airframe Technology, 9 September 1994, Exhibit EC-356, p. 1.

[2550] Prenegotiation Position – Proposed Contract to Boeing Commercial Airplane Group for AST Noise Reduction Research, 13 December 1996, Exhibit EC-371, pp. 1-2 ("Prior to solicitation issuance, several discussions between procurement, technical and {Boeing Commercial Aircraft Group} were conducted to determine and agree that a no-fee procurement was appropriate. It was discussed that {sic} NASA technical

7.1027 For the reasons given above, the Panel considers that the question of whether or not a transaction is properly characterized as a "purchase of services" depends on whether or not the work performed was principally for the benefit or use of the government (or unrelated third parties), or rather principally for the benefit or use of the "service" "seller" itself. The evidence relating to NASA aeronautics R&D, reviewed above, leads to the conclusion that the work that Boeing performed under its aeronautics R&D contracts with NASA was principally for its own benefit or use, rather than for the benefit or use of the U.S. Government (or unrelated third parties).[2551] While NASA's aeronautics R&D contracts take the form of a governmental procurement of services, the totality of the evidence before the Panel leads to the conclusion that the substance of these transactions cannot properly be characterized as a "purchase of services" for the purpose of Article 1.1(a)(1) of the SCM Agreement. Therefore, the Panel finds that the payments made to Boeing under these contracts are covered by Article 1.1(a)(1)(i) of the SCM Agreement as a direct transfer of funds.[2552] The Panel further finds that the access to NASA facilities, equipment and employees provided to Boeing through the R&D contracts and agreements at issue constitutes a provision of goods or services within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

(ii) Whether there is a benefit within the meaning of Article 1.1(b) of the SCM Agreement

Arguments of the European Communities

7.1028 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that the NASA "subsidies" confer "benefits" upon Boeing's LCA division. More specifically, the European Communities argues that: (i) the financial contributions "relate to the production of Boeing LCA"; (ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required

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personal have identified that {sic} Boeing stands to benefit commercially from efforts conducted as a result of the proposed contract. Further, NASA technical personnel cited their understanding of Dan Goldin's (NASA Administrator's) edict that "focused programmes" shall not be fee-bearing. BCAG orally informed the Contract Specialist that they would accept a no-fee contract for this programme, notwithstanding historical precedence of earning fee {sic} for this type of effort.")

[2551] In conducting this analysis, the Panel has found guidance in the Appellate Body report in *China – Auto Parts:*

> "We consider that a panel's determination of whether a specific charge falls under Article II:1(b) or Article III:2 of the GATT 1994 must be made in the light of the characteristics of the measure and the circumstances of the case. *In many cases this will be a straightforward exercise. In others, the picture will be more mixed, and the challenge faced by a panel more complex.* A panel must thoroughly scrutinize the measure before it, both in its design and in its operation, and identify its *principal characteristics*. Having done so, the panel must then seek to identify the *leading or core features of the measure at issue*, those that define its "*centre of gravity*" for purposes of characterizing the charge that it imposes as an ordinary customs duty or an internal charge. It is not surprising, and indeed to be expected, that the same measure may exhibit *some characteristics* that suggest it is a measure falling within the scope of Article II:1(b), and *others* suggesting it is a measure falling within the scope of Article III:2. In making its objective assessment of the applicability of specific provisions of the covered agreements to a measure properly before it, a panel must identify *all relevant characteristics of the measure*, and *recognize which features are the most central* to that measure itself, and *which are to be accorded the most significance* for purposes of characterizing the relevant charge and, thereby, properly determining the discipline(s) to which it is subject under the covered agreements."
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> Appellate Body Report, *China – Auto Parts*, para. 171 (emphasis added, footnote omitted).

[2552] We do not accept that the payments to Boeing are outright "grants". We address this issue in the context of estimating the amount of the subsidy to Boeing's LCA division. See below, para. 7.1100.

to pay anything in return" for the funding and support, and "has not been required to repay the US Government for any resulting commercial rewards"; (iv) Boeing has received valuable "knowledge and experience" from the aeronautics R&D, and (v) it is "axiomatic that such R&D funding and support are not available on the market."[2553]

7.1029 In its second written submission, the European Communities responds to the United States' argument that NASA R&D contracts constitute "value-for-value" exchanges. First, NASA, which "is not in the business of manufacturing LCA or its parts", receives nothing in real value from the contracts and agreements with Boeing. Whereas Boeing receives research experience and valuable technology, NASA receives "summary research reports and license rights that are of no apparent use to it".[2554]

7.1030 Second, in a commercial transaction, one entity will pay another entity to conduct research and development only if it intends to actually utilize the research to some end, i.e. if it can obtain the full rights to the resulting technology and will not pay another entity to conduct research and development "in exchange for nominal research reports to disseminate to the public and license rights to hold onto *ad infinitum*". By contrast, under the NASA R&D contracts, "Boeing can utilize the results of the R&D and keep the technology for itself in exchange for only nominal remuneration".[2555] The European Communities argues that in a market transaction one entity will pay another entity to conduct research and development only if that entity acquires full ownership of any intellectual property rights to the technologies that result from the research and development. The European Communities refers[2556] to an article on intellectual property rights and stem cell research[2557] and a Declaration of Regina Dieu, Legal Counsel in the Airbus SAS Industrial Procurement Legal Department, which states that when Airbus funds an R&D project it exclusively and solely owns any and all Intellectual Property generated or acquired in connection with and during the performance of the R&D project.[2558] In addition, in support of the same argument made in the context of its claim regarding the NASA/DOD waiver/provision of intellectual property rights, the European Communities refers[2559] to an article on collaborative research[2560], a WIPO Training Course[2561] and a contract concluded by Boeing with the National Institute for Aviation Research at Wichita State University.[2562]

7.1031 Third, a commercial entity will not pay another entity to conduct research and development for the public policy objectives pursued by NASA, i.e. preserving the prominent position and increasing the competitiveness of the U.S. aeronautics industry. The argument of the United States that "NASA receives adequate remuneration from Boeing in furtherance of government objectives" is

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[2553] European Communities' first written submission, paras. 526-528, 550-552, 574-576, 590-592, 605-607, 620-622, 633-635 and 652-654.

[2554] European Communities' second written submission, paras. 375 and 377.

[2555] European Communities' second written submission, paras. 376 and 379.

[2556] European Communities' second written submission para. 376.

[2557] Sean M. O'Connor, "Intellectual Property Rights and Stem Cell Research: Who Owns the Medical Breakthroughs?" 39 New Eng. L. Rev. 665 (2005), Exhibit EC-1212, p. 669.

[2558] Declaration of Regina Dieu, 8 November 2007, Exhibit EC-1178.

[2559] European Communities' second written submission, paras. 553-556.

[2560] Rochelle Cooper Dreyfuss, "Collaborative Research: Conflicts on Authorship, Ownership and Accountability", 53 Vand. L. Rev. 1161 (2000), Exhibit EC-1228, p. 1212.

[2561] WIPO-MOST, "Intermediate Training Course on Practical Intellectual Property Issues in Business", 13 November 2003, Exhibit-EC 1229, pp. 42-43.

[2562] Contract Between Boeing Commercial Airplane Group Wichita Division and Wichita State University, Contract No. 000051728, 4 November 2002, Exhibit EC-1231.

circular in that the objective pursued by NASA is to enhance the competitiveness of the US LCA industry.[2563]

7.1032 Finally, not all the results of the NASA R&D programmes are published, and the results that are made available to the public are of little value to companies that did not participate in the research.[2564]

Arguments of the United States

7.1033 In its first written submission, the United States does not explicitly address the issue of whether the payments made to Boeing under R&D contracts confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement. However, in addressing the argument of the European Communities that NASA contracts are grants, the United States rejects the assertion that because the U.S. Government is not in the business of manufacturing LCA or its parts, it cannot possibly receive anything of value in return for the R&D payments made to Boeing.[2565] In its first written submission, the United States argues that NASA's provision of goods and services to Boeing is "always adequately remunerated". The United States recalls that NASA provides goods and services to Boeing pursuant to Space Act Agreements. More specifically, the United States explains that NASA provides Boeing with wind tunnel services, as well as "non-wind tunnel" goods and services. The United States argues that NASA' provision of goods and services to Boeing pursuant to Space Act Agreements is always in exchange for adequate remuneration.[2566]

7.1034 In its second written submission, the United States argues that the European Communities has failed to support its assertions as to the benefit associated with the NASA-Boeing transactions. The argument that NASA received "nothing in return" for the payments made to Boeing pursuant to the R&D contracts is incorrect because in exchange for the money that NASA pays Boeing, the U.S. Government receives a commensurate value. The U.S. Government receives the labour of Boeing scientists and engineers directed to the objectives of the U.S. Government, can disseminate the knowledge they generate for the public benefit and receives intellectual property rights with regard to inventions and data that it would not otherwise hold.[2567]

7.1035 The United States also submits that the European Communities erroneously asserts "that no commercial entity would ever pay another entity to conduct R&D primarily for the other entity's benefit, receiving only nominal research reports to disseminate to the public and license rights it never plans to utilize in return". First, the research reports generated in these transactions are not "nominal", as evidenced by the amount of public information generated by NASA aeronautics research and the wide dissemination of that information.[2568] Second, the European Communities provides no evidence that the U.S. Government never plans to use the patents and licenses acquired under the research contracts. These rights are government rights that can be utilized by any U.S. government agency, including the FAA, DOD or NASA itself in further research conducted by NASA employees. The fact that NASA is not in the business of acquiring or manufacturing LCA "is as irrelevant as it is correct" in this regard.[2569] Third, the R&D conducted at NASA's request is not primarily for Boeing's benefit, as alleged by the European Communities, but for the broader public good.[2570] Fourth, the

[2563] European Communities' second written submission, paras. 378 and 380.
[2564] European Communities' second written submission, para. 381.
[2565] United States' first written submission, paras. 219-225.
[2566] United States' first written submission, paras. 230-267.
[2567] United States' second written submission, para. 65.
[2568] United States' second written submission, para. 67.
[2569] United States' second written submission, para. 68.
[2570] United States' second written submission, para. 69. The United States emphasizes that while NASA does not acquire or produce large civil aircraft, it acquires, produces and disseminates knowledge and that the purpose of the NASA R&D programs is "to develop and disseminate the greatest amount of information

European Communities provides no support for its assertion that a commercial entity will not pay another entity to conduct services that also provide benefit to that other entity. Such a benefit is a normal occurrence in commercial transactions.[2571]

7.1036 In its response to questions 21 and 22 from the Panel, the United States argues that the European Communities has failed to demonstrate that the treatment of intellectual property rights under NASA/DOD R&D contracts constitutes a deviation from normal commercial practice that confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. In this regard, the United States argues that commercial practice differs from case to case. Commercial entities seek to buy the intellectual property rights they *need*, and do not operate from a single paradigm, as the European Communities suggests. While certain commercial transactions may assign the buyer ownership of intellectual property generated in the performance of a contract, there are commercial entities that purchase R&D services in exchange for a limited license to use the resulting intellectual property. By way of example, the United States provides four contracts in which Boeing pays for major research universities to conduct R&D on its behalf, and receives in exchange a license – not ownership – of the intellectual property developed under the contract.

Evaluation by the Panel

7.1037 A financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement if the terms of the financial contribution are more favourable than the terms available to the recipient in the market.[2572] Thus, in order to determine whether NASA's financial contributions to Boeing confer a benefit upon Boeing within the meaning of Article 1.1(b), the Panel must begin by recalling what the *terms* of those financial contributions are. Only then can the Panel proceed to compare *those* terms with the terms of a market transaction.

7.1038 As the Panel has already concluded above in its analysis of the existence of a financial contribution, NASA has made payments to Boeing and granted Boeing access to NASA facilities, equipment and employees *on the condition that Boeing perform aeronautics R&D work that is principally for Boeing's own benefit and use*, rather than principally for the benefit or use of the U.S. Government (or unrelated third parties). While the R&D contracts and agreements of course contain numerous other terms (for example, the contracts and agreements contain or incorporate by reference numerous standardized clauses governing miscellaneous matters), this is, in the Panel's view, the core "term" upon which the financial contributions are provided, i.e. that Boeing use the payments and access to facilities, equipment and employees that it receives from NASA for the purpose of conducting aeronautics R&D work that is principally for Boeing's own benefit and use. The Panel has concluded above that a transaction in which the work performed is principally for the benefit and use of the "seller" cannot properly be characterized as a "purchase of services".

7.1039 In this case, both parties agree that, with regard to the financial contributions that Boeing receives under the NASA R&D programmes, "the relevant market benchmark would be the terms of a commercial transaction in which one entity pays another entity to conduct R&D".[2573] The question, then, is whether, in a commercial transaction, one entity would pay another entity to conduct R&D on these same terms, i.e. on the term that the entity receiving the financial contributions conducts R&D that is principally for the benefit and use of the entity receiving the payment. The Panel believes that no commercial entity, i.e. no private entity acting pursuant to commercial considerations, would

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to the broadest group in the shortest amount of time possible, and not to 'convey resources to Boeing'". United States' second written submission, paras. 62-64.

[2571] United States' second written submission, para. 70.

[2572] See paras. 7.30-7.31 of this Report.

[2573] European Communities' response to question 21, para. 76; United States' response to question 136, para. 85.

provide payments (and access to its facilities and personnel) to another commercial entity on the condition that the other entity perform R&D activities principally for the benefit and use of that other entity. At a minimum, it would be expected that some form of royalties or repayment would be required in the event that financial contributions were provided on such terms. Thus, with respect to the financial contributions provided by NASA to Boeing, which were provided on these terms, we consider that it was not necessary for the European Communities to present benchmark evidence of the terms and conditions of specific market-based R&D financing in order to establish, at least on a prima facie basis, that these NASA transactions conferred a benefit upon Boeing. Rather, it would fall upon the United States, if it wished to rebut this prima facie case, to identify examples of transactions in which commercial entities have paid other commercial entities to perform R&D on these terms, i.e. to perform R&D that is principally for the benefit or use of the entity receiving the funding. The United States has not provided any evidence or examples of commercial transactions in which one entity pays another entity to conduct R&D that is principally for the benefit and use of the entity receiving the funding.

7.1040 Accordingly, the Panel concludes that the financial contributions provided to Boeing under its aeronautics R&D contracts and agreements with NASA confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

7.1041 For these reasons, we find that the payments and access to facilities, equipment and employees that NASA provided to Boeing through the eight aeronautics R&D programmes at issue constitute subsidies within the meaning of Article 1 of the SCM Agreement.

(d) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

(i) Arguments of the European Communities

7.1042 In its first written submission, the European Communities argues that each of the NASA aeronautics R&D programmes at issue is *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement, or, in the alternative, de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.[2574] The European Communities argues that the programmes are *de jure* specific by virtue of the subject matter of the research. More specifically, the European Communities argues that the eight NASA aeronautics R&D programmes at issue are specific within the meaning of Article 2.1(a) because they are explicitly limited to certain enterprises that participate in aeronautics-related R&D. The European Communities argues that because the legislative authority for each of the eight programmes at issue derives from the Space Act, the programmes are also limited "to those industries that can satisfy the objectives of that Act". The European Communities also argues that the programmes are de facto specific because Boeing has received a disproportionate amount of the funding provided under NASA R&D programmes. The European Communities argues that, in addition to receiving a disproportionate amount of the funding awarded by NASA under each of the programmes, Boeing has also received a disproportionate amount of all contracts awarded by NASA.[2575] Finally, the European Communities asserts that "Boeing's active participation at the highest levels of the NASA Advisory Council and its subcommittees reveals that NASA exercises discretion in granting subsidies in a manner that takes full account of Boeing's views and needs".

[2574] European Communities' first written submission, paras. 529-530; 553-554; 577-578; 593-594; 608-609; 623-624; 636-637 and 655-656.

[2575] The European Communities cites to Boeing's Share of NASA Contracts, FY 1991-FY 2004, Exhibit EC-19, which indicates that Boeing received, on average, 23.4 per cent of all NASA contracts over the period 1991-2004. Note 1 to Exhibit EC-19 indicates that the information is drawn from NASA Annual Procurement Report, FY 1991-FY 2004, "One Hundred Principal Contractors", Exhibit EC-341.

7.1043 In its second written submission, the European Communities observes that the United States "does not dispute the conclusion that NASA's aeronautics R&D support for Boeing is specific within the meaning of Article 2.1 of the *SCM Agreement*".[2576]

(ii) Arguments of the United States

7.1044 The United States does not respond to the European Communities' arguments on specificity, except in the context of the wind tunnel access that Boeing received pursuant to a number of Space Act Agreements. In this regard, the United States asserts that NASA's wind tunnel services are "used by a wide range of industries across the U.S. economic spectrum".[2577]

(iii) Evaluation by the Panel

7.1045 In this case, the United States does not dispute that each of the eight aeronautics R&D programmes at issue would, if found to provide subsidies within the meaning of Article 1, be specific under Article 2.1(a) of the SCM Agreement. It is not in dispute that the Space Act explicitly limits the scope of NASA's R&D activities (i.e. to aeronautics and space). It is also not in dispute that each of the eight programmes at issue involves R&D aimed at the "improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles".[2578]

7.1046 The United States' only argument with respect to specificity is that NASA's wind tunnel services are "used by a wide range of industries across the U.S. economic spectrum".[2579] In its response to question 162[2580] from the Panel, the United States indicates that it has provided the following evidence to support this assertion:

> "(1) RAND National Defense Research Institute, Wind Tunnel and Propulsion Test Facilities (Exhibit US-116): found that primary users of NASA wind tunnels are aerospace related, but cover a wide range of applications, including spacecraft, launch vehicles, missiles, fixed-wing and rotorcraft (both military and commercial applications, including fighters, transports, business jets, and operating at all speeds, including hypersonic, supersonic and subsonic speeds), as well as engines.
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> (2) NASA Langley Research Center, Wind Tunnel Enterprise, The Enterprise (Exhibit US-93): wind tunnels are used by "traditional commercial and DoD ground testing community" and being positioned to attract "non-traditional customers e.g. automotive, submersible, recreational, etc."
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> By way of example, NASA reviewed its usage records for two wind tunnels, the 11-foot Transonic Wind Tunnel and the Transonic Dynamics Tunnel, which show usage by the following entities: Bell Helicopters, General Dynamics, Georgia Institute of Technology, Jet Propulsion Laboratories, Lockheed Martin, the U.S. Navy, NextGen Aeronautics, Northrop Grumman, Orbital Sciences, Sandia, and Sikorsky."[2581]

[2576] European Communities' second written submission, para. 383.

[2577] United States' first written submission, para. 251.

[2578] National Aeronautics and Space Act of 1958, Pub. L. No. 85-568, as amended, Exhibit EC-286, s. 102(d)(2).

[2579] United States' first written submission, para. 251

[2580] Question 162 reads, "In its FWS, the United States submits that NASA's provision of wind tunnel services is not specific under Article 2. (United States' first written submission, para. 251) In this regard, the United States asserts that NASA's wind tunnel services are "used by a wide range of industries across the U.S. economic spectrum". Has the United States provided any evidence to support that assertion?"

[2581] United States' response to question 162, paras. 155-156.

7.1047 The Panel considers that the evidence provided by the United States does not support its assertion that NASA's wind tunnel services are "used by a wide range of industries across the U.S. economic spectrum". In fact, the evidence submitted by the United States, and its own summary of that evidence in response to question 162, seems to the Panel to actually contradict that assertion: it confirms that the "primary users of NASA wind tunnels are aerospace related". What the United States evidence seems to demonstrate is that enterprises other than *Boeing* use NASA wind tunnels. However, that does not call into question the fact that NASA's provision of wind tunnel services is specific to "an enterprise *or industry or group of enterprises or industries*".[2582]

7.1048 Apart from the United States' argument relating to wind tunnel services, which the Panel has rejected, the European Communities is correct in observing that the "United States offers no response to the European Communities' *prima facie* case that the eight NASA aeronautics R&D programmes at issue are specific within the meaning of Article 2.1(a) of the SCM Agreement because they are explicitly limited to certain enterprises that participate in aeronautics-related R&D".[2583]

7.1049 For these reasons, the Panel finds that the NASA aeronautics R&D subsidies at issue are specific subsidies within the meaning of Article 2.1(a) of the SCM Agreement. Having concluded that the subsidies are specific within the meaning of Article 2.1(a), it is not necessary for the Panel to address the European Communities' alternative argument that the NASA R&D subsidies at issue are de facto specific within the meaning of Article 2.1(c) of the SCM Agreement "because Boeing receives a share of funding pursuant to these programmes that is disproportionate to its 0.5% share of the US economy" and/or "because NASA exercises discretion in granting these subsidies to Boeing".[2584]

(e) The amount of the subsidy to Boeing's LCA division

(i) Arguments of the European Communities

7.1050 The European Communities estimates that NASA provided $10.4 billion in subsidies to Boeing over the period 1989-2006.[2585] The European Communities allocates approximately $3 billion[2586] of that total to the 2004-2006 period, which is the "reference period" suggested by the European Communities for the purpose of determining whether NASA and other challenged subsidies caused serious prejudice within the meaning of Articles 5 and 6 of the SCM Agreement.

7.1051 The European Communities asserts that the United States has failed to fully disclose information regarding all of the NASA R&D contracts pursuant to which Boeing received LCA-related R&D funding, and that as a result, the European Communities is unable to undertake a

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[2582] If there were any evidence to support the assertion that NASA wind tunnel services are provided to a "wide range of industries across the U.S. economic spectrum" that is so diverse that it cannot be considered a "group of enterprises or industries" for the purpose of Article 2.1 of the SCM Agreement, it would then be necessary to proceed to examine the point in dispute between the parties, which is whether the Panel should confine its analysis and focus only on those entities that received access to NASA wind tunnel services under the eight programmes at issue (as the European Communities argues), or whether it should take a wider analysis of the terms upon which NASA provides wind tunnel services outside of the context of the eight programmes at issue (as the United States argues). However, because the Panel believes that the user of NASA wind tunnel services would either way constitute a "group of enterprises or industries" for the purpose of Article 2.1, we think that it is unnecessary for the Panel to resolve that point.

[2583] European Communities' second written submission, para. 383.

[2584] Ibid.

[2585] NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division, Exhibit EC-25, p. 20.

[2586] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, p. 22. The European Communities allocates $993 million to 2004, $992 million to 2005, and $983 million to 2006.

comprehensive "bottom-up" analysis of the U.S. Government's R&D support for Boeing. The European Communities explains that, because it does not have information regarding the amount of the "direct R&D funding" and "goods and services" provided to Boeing, it must rather rely on a "top-down", industry-level allocation methodology for the purpose of estimating the amount of the subsidies provided to Boeing through each programme. The European Communities asks the Panel to accept this methodology, and the resulting estimate, as the "best information available"[2587].

7.1052 The European Communities uses a "top down" approach, based on aggregated data in NASA's programme budgets and figures regarding the "U.S. civil aircraft industry", to estimate the amount of the subsidy to Boeing. The European Communities begins by estimating the total cost of the eight aeronautics R&D programmes at issue, based on NASA programme budgets. The European Communities then subtracts, from that total, certain estimated amounts for non-LCA related research conducted under the programmes. Specifically, the European Communities seeks to identify and then deduct estimated amounts for (i) engine-specific research; (ii) research related to air traffic; and (iii) research related to other miscellaneous non-LCA related projects (e.g. space-related research[2588]). The European Communities then allocates the remainder exclusively to the "U.S. civil aircraft industry", which includes producers of large civil aircraft (i.e. Boeing), small civil aircraft, helicopters, and their suppliers. The European Communities then allocates a share of that total to Boeing, based on Boeing's share of the "U.S. civil aircraft industry". Using this methodology, the European Communities estimates that $10.4 billion, out of the $18.7 billion in total programme costs, should be allocated to Boeing. The European Communities explains its methodology as follows:

> "For NASA, the EC analysis started with budget data that reflected total annual spending on a programme-by-programme basis, with no indication of how much NASA spent to support any particular company. Based on the budgets themselves and other available facts regarding the eight NASA programmes at issue, it was clear that the budgets reflected R&D spending related to: (1) civil aircraft airframes and components (for all eight programmes at issue); (2) aircraft engines (for some of the eight programmes at issue); and (3) other technologies unrelated to airframes, such as air traffic control or space launch technology (for some of the eight programmes at issue). To arrive at its estimate of the subsidy to Boeing's LCA division from each NASA programme, the European Communities started by isolating the portion of each budget related to item (1) by subtracting items (2) and (3) from the total budget figures where applicable. This resulted in budget figures for each programme that reflected the total amount spent by NASA on R&D related to exclusively civil aircraft airframes and components. Then, recognising that some of this R&D spending likely supported entities in the US civil aircraft industry other than Boeing's LCA division, the European Communities allocated only a portion of the resulting figures to Boeing's LCA division. In performing this allocation, the European Communities considered it reasonable to use a ratio derived by dividing (i) the sum of all Boeing and McDonnell Douglas LCA and parts sales for each year by (ii) the amount of all US civil aircraft and parts sales for that year. The rationale for doing so was that Boeing's LCA division (including McDonnell Douglas' LCA division) is a subset of the larger US civil aircraft and parts industry, in support of which NASA spent the budgeted amounts being allocated."[2589]

[2587] European Communities' first written submission, paras. 63-68 and paras. 525, 549, 573, 589, 604, 619, 632 and 651.

[2588] More specifically, the European Communities deducts estimated amounts for costs relating to the following elements of the R&T Base Program: "Space Transfer and Launch Technology", "Minority University Research and Education Program", "Construction of Facilities", and "Future Space Launch Studies".

[2589] European Communities response to question 163, para. 243.

7.1053 In its second written submission, the European Communities argues that the United States has failed to demonstrate that the funding to Boeing under these programmes was worth less than $750 million, and that $6.48 billion actually went to entities unrelated to Boeing. The European Communities submits that, unless and until the United States discloses all of the contracts (and Space Act Agreements) and sub-contracts pursuant to which Boeing and McDonnell Douglas received "funding and support" under the eight programmes at issue, "including all relevant dollar figures, statements of work, indications and values of goods and services provided by NASA under the contracts, etc.", there is no way to conduct an adequate "bottom-up" analysis of the financial contribution to Boeing from these NASA aeronautics R&D programmes.[2590]

(ii) Arguments of the United States

7.1054 The United States asserts that the European Communities has overestimated the amount of any subsidy provided to Boeing by NASA. According to the United States, the total amount of payments made to Boeing under NASA R&D contracts and agreements entered into under the eight aeronautics programmes at issue was $1.05 billion, out of which less than $775 million was LCA-related. The United States estimates that the total value of the NASA facilities, equipment and employees provided to Boeing under these R&D contracts and agreements was less than $80 million. According to the United States, the remainder of the funding was provided to other NASA contractors, grantees and partners to conduct research under the programmes, as well as the direct costs of NASA's in-house R&D, and "program support" costs that NASA incurs under each programme.[2591]

(iii) Evaluation by the Panel

Introduction

7.1055 The European Communities has demonstrated that the payments and access to facilities, equipment and employees provided to Boeing through aeronautics R&D contracts and agreements are subsidies within the meaning of Article 1 of the SCM Agreement. The Panel will now address the amount of the subsidy to Boeing's LCA division.

7.1056 The European Communities presents the Panel with an estimate of the amount of the subsidy provided to Boeing's LCA division. The European Communities' estimate is based on the publicly available information regarding the total budgeted costs of the eight R&D programmes at issue, and Boeing's share of the U.S. civil aircraft industry. The European Communities argues that the Panel should adopt this "top down" estimate, unless the United States discloses evidence indicating the actual value of the payments and access to facilities, equipment and employees provided to Boeing. The United States submits that it has done exactly that. In the Panel's view, if the United States were able to provide the Panel with the actual information and figures regarding the amount of those subsidies, or information from which the maximum amount of those subsidies could be derived, then such information would necessarily prevail over the European Communities' "top down" estimate. Therefore, the Panel will begin by reviewing the evidence provided by the United States.

[2590] European Communities' second written submission, paras. 365-373.
[2591] United States' first written submission, para. 198.

BCI deleted, as indicated **[***]**

The United States' evidence regarding the maximum amount of the payments made to Boeing for aeronautics R&D over the period 1989-2006

7.1057 The United States initially asserted that NASA records indicate that NASA "disbursements" to Boeing under the challenged programmes amounted to less than $750 million."[2592] The United States set forth, in paragraph 212 of its first written submission, a list of the eight R&D programmes, and the corresponding total disbursements to Boeing under those programmes, which added together, came to $715 million, or "less than $750 million".[2593] The United States adds that much of the "less than $750 million" that was directly provided to Boeing was actually passed along to other companies who performed work as sub-contractors.[2594]

7.1058 In its first set of questions to the parties, the Panel asked the United States to explain how it arrived at the figure of "less than $750 million". The United States responded that NASA reached this estimate by:

(a) Identifying the relevant contracts with Boeing that were awarded under the eight R&D programmes at issue between 1989 and 2006 through a search of the Federal Procurement Data Base (FPDS) of all awards (whether contracts, cooperative agreements, or grants) made to Boeing for the years 1989-2006.[2595] For the years 2004-2006, the relevant database was the Federal Procurement Data Base – Next Generation (FPDS-NG) which had superseded the FPDS.

(b) Eliminating awards that "clearly did not pertain to any NASA Aeronautics programs, such as those related to manned space flight, the International Space Station or space science".[2596]

(c) Calculating the amounts disbursed to Boeing for each such contract from disbursement information obtained from NASA's internal financial databases which, prior to 2004, accumulated data, performed checks and then fed the information into

[2592] United States' first written submission, para. 212. The United Status explains that "disbursements" are the cumulative amounts actually paid to Boeing and MDD under research contracts. There are several points to note about the disbursement information: First, according to the United States, "disbursements" offer very close approximations of the true amount of payments, although they may not be exact due to changes in record keeping over the period 1989-2006; second, disbursements for a particular contract are allocated to a single program, even if multiple programs use the same contract; and third, actual disbursements to Boeing may differ from the amounts planned to be paid at the beginning of each period and appearing in the contract documents; e.g. amounts actually paid under time and materials contracts may vary from anticipated amounts if contracted tasks take more or less time than anticipated and amounts may differ where budget pools are exhausted or contracted work is cancelled; United States' first written submission, para. 212, footnote 303.

[2593] The figure of $715 million includes an estimate of disbursements of $66 million to Boeing pursuant to the ACEE program which predate 1989, and for which company-specific records were not available due to the age of the program.

[2594] United States' first written submission, para. 226, footnote 328. In this regard, the United States provides the example of the HSR program, which had 40 major subcontracts. According to the United States, the structure of the program was such that Boeing effectively served as consortium leader, disbursing funding to the other entities.

[2595] The United States explains that the FPDS is the database of record for procurements for the United States Government and is the only reliable and comprehensive source for data on NASA procurements. The United States explains that, whenever a federal agency awards a procurement action with an obligation greater than $3,000, it must be reported to the Office of Management and Budget in the Executive Office of the President via the FPDS. Following the award, the FPDS is updated over its life with additional obligations as they occur. United States' response to question 7, para. 12.

[2596] United States' response to question 7, para. 14.

FPDS. NASA's system was known as the NASA Procurement Management System (NPMS).[2597]

7.1059 The United States also submitted Exhibit US-1202 as part of its response to the Panel's question. Exhibit US-1202 sets forth the amounts disbursed under each contract, grouped by R&D programme, as determined based on the above methodology.[2598]

7.1060 The Panel sought to confirm the above understanding of the methodology that the United States used to calculate the amount of payments made to Boeing pursuant to contracts under the eight R&D programmes in its second set of questions to the parties. The Panel also sought additional details from the United States on: (i) the list of relevant contracts obtained from the FPDS database searches of awards to Boeing between 1989 and 2006; (ii) the awards that were determined not to pertain to any NASA aeronautics programmes; and (iii) identification of amounts disbursed under each relevant contract award on the basis of information contained in the NPMS and NASA's internal financial records.

7.1061 The United States responded as follows. First, it confirmed the Panel's basic understanding as outlined above. Second, it indicated that NASA did not print out the FPDS list of all awards to Boeing between 1989 and 2006 because the FPDS and FPDS-NG contain entries for individual purchase orders and task orders issued under each contract, and therefore contain thousands of entries for such awards. According to the United States, NASA used the list as the basis for additional steps to weed out instruments not related to the European Communities' claims.[2599] Third, it explained in greater detail than previously had been provided to the Panel the process by which NASA "eliminated" awards that it ascertained did not pertain to the eight R&D programmes.

7.1062 The first, and most important, step in the elimination process was to identify awards issued by NASA research centers that perform aeronautics research. In this regard, the United States explained that NASA conducts all of its research activities at nine research centers. Four of those centers; namely, Langley Research Center, Glenn Research Center, Ames Research Center and Dryden Research Center, are responsible for all aeronautics research conducted by NASA. These four research centers administer the eight R&D programmes and perform all aeronautics research required in support of NASA's other programmes. According to the United States, each research center awards its own contracts for work performed in support of its projects.[2600] Because the FPDS record for each award contains a code that indicates the center that awarded the instrument in question, NASA was able to filter the FPDS list of Boeing contracts to remove all contracts awarded by the five NASA research centers that do not perform aeronautics research.

7.1063 The second part of the elimination process involved elimination of contracts that, although awarded by one of the four NASA research centers that perform aeronautics research, nevertheless pertained to non-aeronautics research (e.g. contracts whose subject matter pertained to space, atmospheric science, airspace hypersonics, vertical take-off and landing and short takeoff and landing,

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[2597] United States' response to question 7, para. 15. According to the United States, the FPDS did not record *disbursement* data. However, prior to 2005, NASA routinely accumulated disbursement data in its NPMS. The United States submits that for each action identified for Boeing, NASA could accurately identify amounts obligated and disbursed for each contract, by year. The FPDS-NG also did not record disbursement data for the years 2005 and 2006, however, the United States indicates that NASA obtained disbursement data for these years from NASA's internal financial records.

[2598] The United States notes that the ACEE Program is so old that no disbursement data were available on either FPDS or NPMS. NASA therefore derived an estimate for disbursements to Boeing through contracts under the ACEE Program based on Boeing's share of the NASA program budget for the next oldest program, ACT. United States' response to question 7, para. 15.

[2599] United States' response to question 179, para. 179.

[2600] United States' response to question 179, para. 180.

and aircraft support related to the maintenance and upkeep of NASA's aircraft).[2601] Identification of the subject matter of the contracts was based on the FPDS and FPDS-NG fields that describe the subject matter of each contract.

7.1064 In response to the Panel's request for additional detail as to its identification of amounts disbursed under each relevant award on the basis of data in the NPMS and NASA's internal financial records, the United States further explained that the FPDS databases contain only data on the amounts "obligated" for funding a particular contract (i.e. budgeted funds provided to a prime contract for costs to be expended in the performance of that contract).[2602] Funds "obligated" are not "disbursed" to the contractor until the contractor has demonstrated an entitlement to payment.[2603] The NPMS database, in addition to containing information on funds obligated, also recorded the amounts actually disbursed for all disbursements prior to 2005. For the disbursement figures for 2005 and 2006, NASA used data from NASA's SAP/BW system.[2604]

7.1065 The Panel also asked the United States to explain how the Panel could satisfy itself that the information submitted by the United States as to the universe of R&D contracts and agreements between NASA and Boeing is accurate and complete. The United States responded by explaining that NASA had conducted the following verification exercise:

(a) NASA conducted a FPDS/FPDS-NG database search of all contracts with Boeing and Boeing subsidiaries (i.e. not limited to aeronautics-related contracts, or contracts pursuant to the challenged R&D programs) as identified in the list of 100 Principal Contractors published in NASA's Annual Procurement Reports for the 1989-2006 period.

(b) NASA compared the values of awards identified from that search (a total of **$30.4 billion** for 1989-2006) with the total value of awards to Boeing published in the NASA Annual Procurement Reports. According to the United States, in no case was the variation in values of awards to Boeing in the Top 100 contractors list as reported by FPDS and FPDS-NG to the value reported in the Annual Procurement Reports more than 2.1 per cent.[2605]

7.1066 The United States contends that this part of the check verifies that the NASA's contract data set, based on its search of its FPDS/FPDS-NG databases, closely matches the published data from the Annual Procurement Reports which are accepted by the United States and the European Communities as a valid and complete representation of all NASA contracts with Boeing.[2606]

[2601] United States' response to question 179, para. 181. The United States explains that the four aeronautics research centers also conduct some non-aeronautics research.

[2602] United States' response to question 179, para. 184.

[2603] United States' response to question 179, para. 184, footnote 196.

[2604] United States' response to question 179, para. 184.

[2605] The results of the comparison are at Exhibit US-1301. The United States appears to have based its valuations on the amounts obligated under the awards as reported in the FPDS/FPDS-NG, rather than the actual disbursements made under the contracts, unlike its original estimate, which relied on the actual disbursements as indicated from the NPMS and SAP/BW internal databases. The United States explains that the actual funds disbursed under a contract may be (i) less than the funds allotted (e.g. where the contractor finishes the work before the funds run out); or (ii) more than the amount shown in the final contract modification (e.g. if adjustments are necessary when the contract is closed out). According to the United States, the funds allotted under the contract modifications allow an estimate of the maximum that NASA was authorized to spend under the contract. United States' response to question 6, para. 3, footnote 7.

[2606] United States' response to question 188, para. 217. We note, however, that the United States indicates that the FPDS/FPDS-NG databases were the source for the Annual Procurement Report data, so this

BCI deleted, as indicated **[***]**

7.1067 The United States continued this "verification" exercise to arrive at what it contends is the "maximum value" of contracts with Boeing under the eight R&D programmes:

> (c) From the FPDS/FPDS-NG database search of all contracts with Boeing and its subsidiaries (including any that were not in the 100 Principal Contractor's List), NASA then filtered out contracts awarded by NASA centers that perform no aeronautics research. The value of the eliminated contracts (i.e. contracts with non-aeronautics NASA centers) for 1989-2006 was **$29 billion for 1989-2006**. According to the United States, this amount represents 96.5 per cent of the value of all of Boeing's contracts with NASA. In other words, the "vast majority" of Boeing's contracts with NASA are related to non-aeronautics activities (i.e. NASA facilities, NASA research activities and NASA programs supporting NASA's space and exploration objectives), none of which have been challenged in this dispute.

7.1068 The United States contends that, once contracts issued by NASA facilities that conduct no aeronautics research are factored out, there are only **$1.05 billion** in contracts remaining for the 1989-2006 period that are even *potentially* related to the European Communities' claims regarding aeronautics research.[2607]

> (d) Finally, NASA personnel manually reviewed the descriptions of the research conducted under each Boeing contract awarded by the four centers that conduct aeronautics research. The result identified every Boeing contract with the four aeronautics centers, not simply those related to aeronautics R&D. Then NASA personnel assigned contracts to 13 various subject categories and excluded only those contracts within nine of the clearly non-LCA-related categories.[2608] The remaining group of contracts had a value of **$775 million**, which according to the United States, represents the "maximum value" of Boeing contracts related to EC-challenged R&D.[2609]

7.1069 The United States argues that, while the value of the contracts identified in this verification exercise is approximately $116 million higher than the value of contracts reported by the United States at paragraph 212 of its first written submission, the difference is not significant.[2610]

7.1070 Certain of the European Communities' criticisms of the United States' "payments" estimate of $750 million relate to the scope of transactions included in the estimate; i.e. that (i) the estimate

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verification step does not address the European Communities' criticisms of the reliability of the FPDs/FPDS-NG databases as the starting point for the identification of relevant contracts. The European Communities makes this point also. European Communities' comments on United States' response to question 188, para. 207.

[2607] United States' response to question 188, para. 219. The United States further notes that the contract set at this stage still includes contracts relating to engine research, research into hypersonics and air traffic control, which the European Communities has stated are not related to its claims, as well as research funded by programs other than the eight aeronautics R&D programs.

[2608] See United States' response to question 188, paras. 218 and 220.

[2609] The United States contends that this list of remaining contracts is over-inclusive (and therefore the value of such contracts is certainly larger than the actual value of NASA research contracts related to the European Communities' challenge) because, for purposes of this verification exercise, where the description of research under a contract involved both aeronautics and non-aeronautics related R&D, NASA treated the whole contract as related to the dispute. United States' response to question 188, para. 222.

[2610] The United States explains that in order to compare the estimate at paragraph 212 of its first written submission, with the estimate arrived at through the verification exercise in response to Panel question 188, it is appropriate to subtract from the $715 million initial estimate the estimated $66 million in respect of the ACEE program. United States' response to question 188, para. 222, footnote 239. If we do this, we find that the difference between the two estimates is $126 million, not $116 million as indicated by the United States.

excludes payments made to Boeing as a sub-contractor, and (ii) does not include the value of goods and services provided to Boeing through Space Act Agreements. Both of these criticisms are without foundation. Leaving aside the strongly disputed issue of whether any payments that Boeing received as a sub-contractor pursuant to contracts between NASA and third parties are financial contributions covered by Article 1.1(a)(1) of the SCM Agreement[2611], including such payments within the scope of the transactions in the "payments" estimate would not increase the total amount. It would actually *reduce* the total amount. If a proper estimate of the total amount of the payments received by Boeing should include/add payments that Boeing received as a sub-contractor, then that estimate must logically exclude/subtract payments that Boeing made to its sub-contractors when it was Boeing that was the prime contractor. The parties appear to agree that the total amount of the payments that Boeing received as a sub-contractor is likely far less than the total amount of the payments that Boeing paid out to its own sub-contractors. Therefore, adding the value of the payments that Boeing received as a sub-contractor would actually lead to a reduction – likely a significant reduction – in the total amount of the payments that should be included in the estimate of the amount of the subsidy to Boeing. As for the exclusion of the value of "goods and services" from the United States' $750 million estimate, the United States acknowledges that its payments estimate relates only to *payments* to Boeing under NASA R&D contracts and agreements, and does not include the value of any *goods and services* provided to Boeing through R&D contracts or agreements. It provides a separate valuation of the goods and services provided by NASA pursuant to Space Act Agreements with Boeing, which the Panel addresses below. Therefore, this criticism is also without foundation.

7.1071 The European Communities argues that the United States has offered no means of verifying that NASA has properly identified and counted all of the LCA-related contracts with Boeing (i.e. the completeness of the contract data set)[2612]; and has provided no basis for concluding that its "disbursements" estimate captures all of the funds actually disbursed to Boeing under the R&D programmes at issue.

7.1072 As to the criticisms directed towards the completeness of the relevant contract data set, the European Communities alleges that the FPDS/FPDS-NG database is a flawed and unreliable source for identifying the contracts between NASA and Boeing.[2613] In this regard, the European Communities refers to a Congressional Research Service Report and a General Accounting Office (GAO) report critical of the FPDS database.[2614] The European Communities also alleges that the United States failed to include four contracts with Boeing in its contract data set in Exhibit US-1202 (worth $41 million) and that this omission of relevant contracts from the contract data set on which the disbursement estimate is based also calls into question whether the estimate includes all of the relevant contracts between NASA and Boeing.[2615]

7.1073 The Panel has reviewed the exhibits submitted by the European Communities to support its contention that the FPDS/FPDS-NG databases cannot be relied upon to produce a complete set of relevant contracts. The Panel is not persuaded that the evidence supports the European Communities'

[2611] The arguments of the parties on this issue are found in their responses, and corresponding comments, to questions 3(b), 130, 131 and 132.

[2612] European Communities' comments on United States' response to question 7, para. 6.

[2613] European Communities' response to question 173(b), para 301.

[2614] CRS Report for Congress, The Federal Funding Accountability and Transparency Act: Background, Overview, and Implementation Issues, 6 October 2006, Exhibit EC-1375; GAO, Improvements Needed to the Federal Procurement Database System-Next Generation, GAO 05-960R, 27 September 2005, Exhibit EC-1376. See also, GAO, Reliability of Federal Procurement Data, GAO-04-295R, 30 December 2003, Exhibit EC-1377.

[2615] European Communities' comments on United States' response to question 6, para. 8.

contentions in this regard.[2616] Moreover, the Panel notes that there do not appear to be any practical alternatives for the Panel, or for NASA, to reliance on the FPDS/FPDS-NG database to generate an initial list of contracts between NASA and Boeing. We are inclined to agree with the United States that a list of contracts generated by FPDS/FPDS-NG inquiries would be the starting point for compiling any list of contracts between NASA and Boeing. Although not perfect, it is not only the best source, but the only practical source of information on the universe of contracts between NASA and Boeing.

7.1074 In relation to the European Communities' allegation that the United States had failed to include four relevant contracts between NASA and Boeing in the list of contracts in Exhibit US-1202 that formed the basis for the United States' disbursement estimate, the United States explains that one of the contracts in question was included in the list in Exhibit US-1202 but was mislabelled as a different contract[2617] and that the other three contracts were "apparently missed in the initial analysis", although they were captured in the calculation of the "maximum value" of Boeing contracts in the United States' verification exercise performed in response to Panel question 188 and set forth in Exhibit US-1305.[2618] The United States does not elaborate on exactly how the three contracts were apparently missed in the initial analysis, although it is reasonable to assume that they were erroneously omitted by NASA personnel as part of the elimination of contracts whose subject matter indicated that they pertained to non-aeronautics research.

7.1075 If the United States' verification exercise correctly portrays the relative value of contracts awarded to Boeing by the four NASA research centers that perform aeronautics research ($1.05 billion) compared to all contracts awarded to Boeing by the NASA research centers that do not perform aeronautics research ($29 billion), then it appears that the most significant element of the United States' methodology for identifying the relevant contracts is its filtering of the FPDS/FPDS-NG databases to eliminate the latter category of contracts.

7.1076 It was in response to questions 179 and 188 from the Panel that the United States explained that, once contracts issued by NASA facilities that conduct no aeronautics research were filtered out of the "all Boeing contracts" set, there are only **$1.05 billion** in contracts remaining for the 1989-2006 period that are even potentially related to the European Communities' claims regarding aeronautics research.[2619] In its comments on the United States' response to questions 179 and 188, the European Communities did not criticise this aspect of the United States' methodology for identifying the relevant contracts. Given that this seems to be the most significant element of the United States methodology for identifying the maximum value of contractual payments made to Boeing, the Panel subsequently sought further submissions from the parties. In its response to question 339, the United States confirmed, among other things, that the Panel was correct in understanding that, as a factual matter, all contracts that are related to the European Communities' challenges to non-engine aeronautics research must have been awarded by the four NASA centers (Langley, Glenn (formerly Lewis), Ames, and Dryden) that are responsible for all aeronautics research conducted by NASA and cannot have been awarded by any other NASA center or unit:

[2616] More specifically, we consider that the European Communities has taken the comments made in the reports out of context, and that the criticisms of the FPDS system do not pertain to whether or not the FPDS would be a reliable source of NASA-specific contract information.

[2617] United States' response to question 184, para. 191. Contract NAS1-20553 was mislabelled as NAS1-20550. The United States also indicates that, although the amount awarded under this contract was originally $22 million (as alleged by the European Communities), the amount actually disbursed was $1.8 million.

[2618] United States' response to question 184, para. 191. According to the United States, the combined value of disbursements under these three contracts was $15.2 million.

[2619] United States' response to question 179, para. 180; United States' response to question 188, para. 219.

> "... The EC challenge relates to a group of named research programs, all of them involving aeronautics research. All of NASA's expenditures, including procurements, cooperative agreements, and grants, are administered through one of the various centers. Only four of the centers – Langley Research Center, Glenn Research Center (formerly known as Lewis), Ames Research Center, and Dryden Flight Research Center – perform aeronautics research. These centers administered all of the aeronautics research under the programs challenged by the EC. The remaining centers were not responsible for administering any of the programs challenged by the EC. It is NASA policy that the center implementing a research program is responsible for awarding any contracts, cooperative agreements, or grants to perform research under that program. Therefore, all contracts (and cooperative agreements) that are related to the EC challenges to non-engine aeronautics research must have been awarded by those four NASA centers, and cannot have been awarded by any other NASA center or unit."[2620]

7.1077 In its comments on the United States' response to question 339, the European Communities advances two arguments in response to the United States' assertion that all contracts that are related to the European Communities' challenges must have been awarded by those four NASA centers, and cannot have been awarded by any other NASA center or unit.

7.1078 First, that "{t}he European Communities challenges non-engine aeronautics-related R&D conducted by NASA at any of its facilities. The specific facility that conducts such R&D is immaterial to the EC claims and arguments".[2621] The Panel understands that the European Communities has challenged payments and access to facilities, equipment and employees provided to Boeing under the eight R&D programmes at issue, regardless of the specific NASA center involved. However, in the Panel's view, this still does not respond to the United States' contention that, as a factual matter, all contracts that are related to the European Communities' challenge to aeronautics research must have been awarded by Langley, Glenn (formerly Lewis), Ames, or Dryden.

7.1079 Second, the European Communities argues that "{w}hile the bulk of NASA's expenditures related to aeronautics may have been undertaken by Langley, Glenn (formerly Lewis), Ames, and Dryden, the United States is incorrect that *all* NASA aeronautics expenditures were undertaken by these four centers". The European Communities notes that "{e}ven a cursory review of NASA's "aeronautical research and technology" budget summaries reveals that some of NASA's aeronautics funding was in fact spent by NASA centers other than these four".[2622] In this connection, the European Communities refers the Panel to "NASA Aeronautical Research and Technology, Budget Summaries, FY 1991-FY 2000" (Exhibit EC-1440). The "NASA Aeronautical Research and Technology, Budget Summaries, FY 1991-FY 2000" submitted by the European Communities identifies aggregate, yearly figures on the "resource requirements" for the R&T Base Program and other "Aeronautical focused programs", followed by a breakdown of the "Distribution of Program Amount by Installation". What this document shows is that while "some of NASA's aeronautics funding was in fact spent by NASA centers other than these four", i.e. other than Langley, Glenn (formerly Lewis), Ames, and Dryden, as asserted by the European Communities, it appears that over the period 1989-2006, these four centres accounted for more than 99 per cent of "Aeronautical Research & Technology Resources". Thus, rather than calling into question the United States' assertion, this information appears to offer confirmation that *substantially all* NASA aeronautics expenditures were undertaken by these four centers.

[2620] United States' response to question 339, para. 82 (footnote omitted).
[2621] European Communities' comments on United States' response to question 339, para. 78.
[2622] European Communities' comments on United States' response to question 339, para. 79.

7.1080 As for the accuracy of the disbursement information related to each of the identified contracts, the Panel notes, first, that the European Communities does not challenge the use of "disbursements" data as a close approximation of the amount of "payments" made to Boeing under the research contracts. The European Communities does challenge the reliability of NASA's "financial databases", which presumably include the NPMS and SAP/BW systems that were the source of the disbursements data. In this regard, the European Communities cites from a report of the GAO that indicates that NASA had been on GAO's "high-risk" list since 1990 because of its failure to effectively oversee its contracts, due in part to NASA's lack of accurate and reliable information on contract spending.[2623] The Panel has reviewed this GAO Report and notes that it does not refer to the NPMS or SAP/BW systems specifically, nor does it suggest that those systems would be unreliable sources of information as to actual disbursements made by NASA. We are therefore not persuaded that the European Communities has adequately supported its allegations that NASA's financial databases are unreliable for purposes of estimating the value of NASA's R&D subsidies to Boeing.

7.1081 It is clear to the Panel that NASA has made mistakes in compiling the relevant information, and that NASA's records are not perfect (and as we discuss below, in relation to Space Act Agreements, far from perfect). However, the European Communities has not demonstrated that the United States' estimate involved any "methodological" errors. The Panel therefore estimates that the total amount of payments to Boeing through R&D contracts under the eight R&D programmes over the period 1989-2006 was **$1.05 billion**.

> The United States' evidence regarding the maximum value of the NASA facilities, equipment and employees provided to Boeing for aeronautics R&D over the period 1989-2006

7.1082 The United States estimates that the value of goods and services supplied to Boeing under non-reimbursable and partially reimbursable SAAs was $79.7 million.[2624] The United States' estimate reflects the value of facilities, equipment and employees captured in "Estimated Price Reports" prepared by NASA in connection with the Space Act Agreements that it entered into with Boeing.

7.1083 The United States provided an original list of relevant Space Act Agreements as Exhibit US-74.[2625] In the second set of questions, the Panel asked the United States to explain the methodology that it used to develop the list of Space Act Agreements in Exhibit US-74. The United States responded that the list of relevant Space Act Agreements set forth in Exhibit US-74 was obtained by

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[2623] European Communities' response to question 173(b), paras. 300-302; Statement of Gregory D. Kutz, NASA Long-standing Financial Management Challenges Threaten the Agency's Ability to Manage its Programs, 27 October 2005, Exhibit EC-1313. The European Communities also quotes from a 2006 Congressional Research Service Report which noted that the GAO had noted that FPDS users lacked confidence in the data provided because there was no rigorous system in place to ensure the accuracy and completeness of the data; Exhibit EC-1375.

[2624] United States' response to question 175, para. 160. The Panel recalls that NASA provides goods and services under *reimbursable* Space Act Agreements when it has unique goods, services and facilities that are not being fully utilized to accomplish mission needs, which it can make available to others on a non-interference basis. United States' first written submission, para. 233, footnote 336. NASA requires full reimbursement, defined as "full cost recovery" for the goods, services or facilities provided. NASA also has the authority to accept *partial reimbursement* where a proposed contribution of the SAA partner is fair and reasonable compared to the NASA resources to be committed, NASA program risks and corresponding benefits to NASA. The European Communities does not challenge the supply of goods and services under Space Act Agreements to the extent that Boeing pays cash in exchange for those goods and services.

[2625] The United States first referred to this list of Space Act Agreements at para. 201 of its first written submission (footnote 283), in the context of its criticism of the inclusion of $3.3 billion from NASA's "institutional support" budgets in the European Communities' $10.4 billion estimate. According to the United States, from the $3.3 billion in "institutional support" challenged by the European Communities, NASA has only provided limited goods and services to Boeing pursuant to 35 Space Act Agreements that cover discrete uses by Boeing of NASA wind tunnels and work on other jointly undertaken R&D projects.

searching NASA's "physical and electronic records" to identify Boeing Space Act Agreements, and then taking the relevant information from the hard copy documents. At that time, NASA had not sought to determine which programme funded the particular Space Act Agreements in Exhibit US-74, and the United States subsequently explained during the second meeting with the Panel, that Exhibit US-74 included some Space Act Agreements that on closer inspection, had not in fact been funded under the challenged R&D programmes.[2626]

7.1084 At the second meeting with the Panel, the United States submitted Exhibit US-1256, "The Value of NASA Facilities, Equipment, and Employees under Selected Space Act Agreements". Exhibit US-1256 lists the relevant Space Act Agreements for which the United States was able to obtain valuation information.[2627] The total non-reimbursable value of the instruments listed there was estimated to be $82.9 million. However, the United States also explained during the Second Meeting that Exhibit US-1256 was not yet "final" (and also that some of the Space Act Agreements that had been listed in Exhibit US-74 were not, on closer examination, related to the challenged R&D programmes).

7.1085 The United States subsequently revised Exhibit US-1256 in response to the Panel's Question 185 to add two SAAs and remove two cooperative agreements that were inadvertently included on the original list of SAAs in Exhibit US-1256. The United States indicated in response to Panel question 185 that revised Exhibit US-1256 contains all of the SAAs "for which the United States has value information".[2628] The total of "NASA Planned Contributions" under the 21 Space Act Agreements listed in the revised Exhibit US-1256 was $79.9 million.

7.1086 In response to a question from the Panel as to how the value of NASA facilities, equipment and employees provided through Space Act Agreements set forth in Exhibit US-1256 was calculated, the United States indicated that these figures are based on "Estimated Price Reports" contained in either the physical files related to an SAA, or in NASA's TechTrackS System, which includes data on the Estimated Price Reports for SAAs.

7.1087 The TechTrackS System is an electronic database that also contains data on the R&D programme that is the source of funding for particular SAAs. The United States advises that, in compiling Exhibit US-1256, NASA removed SAAs that were funded by programmes other than the eight R&D programmes at issue in this dispute. The United States indicated that the list of Space Act Agreements in revised Exhibit US-1256 contains all of the Space Act Agreements "for which the United States has value information".[2629] In other words, Exhibit US-1256 does not purport to be a comprehensive valuation of all relevant Space Act Agreements. Rather, in the light of the difficulties accessing value information for Space Act Agreements that are not recorded in the TechTrackS system (i.e. Space Act Agreements entered into prior to 1993 by all research centers except the Langley Research Center, which apparently entered onto the electronic database information for its

[2626] United States' response to question 183, para. 190; United States' non-confidential oral statement at the second meeting with the Panel, para. 63.

[2627] United States' non-confidential oral statement at the second meeting with the Panel, para. 63. See also, United States' comments on European Communities' response to question 172, para. 299, where the United States explains that the value information in Exhibit US-1256 that was based on corresponding value information reported in Exhibit US-74 was based on documents submitted to the Panel (these are listed in footnote 489), while the remaining value information was based on information in the TechTrackS database.

[2628] United States' response to question 185, para. 193.

[2629] United States' response to question 185, para. 193; United States' comments on European Communities' response to question 172, para. 300.

pre-1993 contracts), revised Exhibit US-1256 is a listing of the relevant Space Act Agreements for which Estimated Price Reports were available, or for which other value information was available.[2630]

7.1088 The European Communities advances a number of arguments concerning the United States' valuation of goods and services provided pursuant to Space Act Agreements, including the following:

- First, it alleges that the United States has not submitted copies of all relevant Space Act Agreements between NASA and Boeing.[2631] In support of this contention, the European Communities alleges that NASA failed to submit into evidence copies of two relevant Space Act Agreements that the European Communities was able to identify through FOIA requests.[2632]

- Second, the European Communities has complained that in estimating the values of Space Act Agreements in revised Exhibit US-1256, the United States has *failed to tabulate values* for all of the Space Act Agreements that have been identified as relevant Space Act Agreements by either the European Communities or the United States (these are set forth in Exhibit EC-1374, which lists 21 such Space Act Agreements).[2633]

- Moreover, the European Communities argues that the United States' valuation of the facilities, equipment and employees provided to Boeing through Space Act Agreements is unsupported as the United States has failed to submit the Estimated Price Reports and the results of its inquiries of the TechTrackS system that form the basis for the estimate.[2634]

7.1089 The United States explains that six of the 21 SAAs for which it had not tabulated a value were signed prior to 1993 and were not included on the TechTrackS System.[2635] However, the United States notes that Langley Research Center entered historical (i.e. pre-1993) SAA data on the TechTrackS System, and asserts that the Langley Center originated the greatest number of agreements related to the European Communities' allegations, with greater value than those originated by other centers, so the data in revised Exhibit US-1256 can be considered to be "substantially complete".[2636]

7.1090 According to the United States, nine of the remaining 17 SAAs[2637] that the European Communities had identified were valued at a total of $8.1 million and were sponsored by a

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[2630] As indicated previously, in United States' comments on European Communities' response to question 172, para. 299 (footnote 489), the United States lists the Exhibits (all of which are BCI) from which the other value information was drawn, namely, Exhibits US-70 (BCI), US-109 (BCI), US-113 (BCI), US-120 (BCI), US-122 (BCI).

[2631] Exhibit US-1245 was provided by the United States in response to a question from the Panel (issued on 17 December 2007) requesting the United States to submit a list of NASA contracts for which Exhibits have been submitted by the United States, along with other information related to the contract and the relationship of the contract to the U.S. submissions.

[2632] The European Communities identifies Exhibits EC-1314 and EC-1315 as "examples" of such Space Act Agreements; see European Communities' comments on United States' response to question 6, para. 14.

[2633] European Communities' response to question 172, para. 297. The European Communities argues that the unavailability of data on estimated price reports through the TechTrackS system for Space Act Agreements signed before 1993 does not excuse the United States from submitting information about the value of goods and services provided through the relevant Space Act Agreements. European Communities' comments on United States' response to question 184, para. 187.

[2634] European Communities' comments on United States' response to question 183, para. 185.

[2635] The TechTrackS system was not operational prior to 1993, so data pertaining to Space Act Agreements entered into prior to 1993 are not necessarily retrievable using TechTrackS.

[2636] United States' comments on European Communities' response to question 172, para. 300.

[2637] By the Panel's calculation, there are 15 (not 17) remaining SAAs from the original 21 if we subtract from 21 the six that were signed prior to 1993.

NASA office that provided general support for putting such agreements into effect, and were possibly related to one of the eight R&D programmes.[2638] The United States makes no mention of the possible value of the other eight (or six) SAAs on which there is no value information.

7.1091 The United States considers that the Panel can have a high degree of confidence that the United States has identified "all of the available Boeing Space Act Agreements that are related to the eight challenged programs".[2639] The United States suggests that, should the Panel consider that any Space Act Agreement was improperly excluded, it assign a value to it equal to the average value of SAAs listed in the revised Exhibit US-1256 (i.e. $4.7 million).

7.1092 The Panel notes that, although the United States was subsequently able to advise that the value of nine SAAs for which value information was not tabulated in revised Exhibit US-1256, was approximately $8.1 million in total, it did not revise the total value of SAAs set forth in its revised version to Exhibit US-1256 to reflect the values of those SAAs. Leaving that point to one side, the position appears to be:

- the United States has identified 38 relevant Space Act Agreements, copies of which it has submitted to the Panel. The list of these Space Act Agreements is at Exhibit US-1245.

- the United States has tabulated value information for 21 of the 38 Space Act Agreements, this valuation appearing in revised Exhibit US-1256 and amounting to $79.9 million.

- the United States has estimated in addition that nine Space Act Agreements whose values were not part of the $79.9 million estimate, are worth approximately $8.1 million.

7.1093 As indicated above, the United States has only been able to tabulate value information for 21 of the 38 known Space Act Agreements between NASA and Boeing. Second, the United States' valuation of goods and services provided to Boeing does not capture the value of NASA facilities, equipment and employees provided to Boeing in conjunction with R&D contracts (as distinguished from Space Act Agreements).

7.1094 As a result of these limitations in the information available concerning the value of NASA facilities, equipment and employees provided to Boeing, the United States has advanced an alternative methodology for estimating the maximum value of the free access to facilities, equipment and employees provided to Boeing. Specifically, in its responses to question 175, the United States argues that the Panel could, for the purpose of estimating the maximum value of this financial contribution, use Boeing's share of total payments made to all of NASA's aeronautics R&D contractors, partners, and grantees. In other words, an estimate of the maximum value of the use of NASA facilities, equipment and employees to Boeing would be derived from the value of NASA's payments to Boeing. The United States explained in its response to question 175[2640] that:

> "The United States estimates that the value of goods and services supplied to Boeing under non-reimbursable Space Act Agreements was $57.7 million and the value under nonreimbursable Space Act Agreements was $21.9 million.
>
> NASA's databases and internal information did not allow a valuation of goods and services provided to all other contractors. With regard to Space Act Agreements that might have been used to provide goods and services, the only way to determine with

[2638] United States' comments on European Communities' response to question 172, para. 300.
[2639] United States' comments on European Communities' response to question 172, para. 301. This statement is qualified in a way that suggests that there may be other SAAs that are no longer available.
[2640] United States' response to question 175, paras. 160-162.

> certainty whether an agreement relates to large civil aircraft more generally or to the eight challenged programs in particular is to review the physical copy of the contract. That is simply not possible in light of the hundreds of Space Act Agreements signed with companies other than Boeing. With regard to the EC allegations that NASA facilities and personnel referenced in procurement contracts were separate provisions of personnel and facilities to Boeing, NASA's records do not allow the linking of personnel to contracts in a way that would allow quantification and valuation.
>
> Should the Panel feel constrained to perform an estimate, it could use the Boeing share of payments made under contracts, cooperative agreements, grants, and government agreements to estimate the Boeing share of any overall provisions of goods or services that it finds to exist."

7.1095 The Panel requested clarification from the United States, and in response to question 352, the United States explained that:

> "Despite the many objections to a methodology that treats NASA facilities, equipment, and employees as working for private enterprises, the U.S. response to Question 175 sought to assist the Panel in valuing the facilities, equipment, and employees related to contracts if it nonetheless found that they were 'provided' to contractors in the sense of Article 1.1(a)(1)(iii) of the SCM Agreement and conferred a benefit. The suggestion was that if the Panel considered a class of NASA personnel or other expenditures to be in reality a good or service provided to contractors, it could determine the share attributable to Boeing based on the company's 10.4 percent,[2641] share of the total value of NASA aeronautics research contracts in the 1989-2006 period.
>
> To take an example, for most of the period, NASA divided its budget between program budgets (covering expenditures under contracts, cooperative agreements, and grants with outside suppliers) and 'Institutional Expenses' (which covered primarily personnel costs).[2642] If the Panel were to conclude that some portion of one of these budgets represented facilities, equipment, or employees provided to contractors, it could allocate part of that value to Boeing based on the company's share of contracting.
>
> To give a numerical example, the EC asserts that the sum of program budgets under the challenged programs from 1989 to 2006 was $12,235 million.[2643] NASA's data show that the agency paid contractors (including Boeing) $7,446 million to conduct aeronautics research during that period,[2644] indicating that payments under other types of contracts were $4,789 million. If the Panel decided that some portion of these expenses were a financial contribution to contractors within the meaning of

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[2641] (*footnote original*) United States' response to question 175, para. 155.

[2642] (*footnote original*) "Institutional expenses", comprised civil servant salaries, benefits, costs of administrative buildings, travel, maintenance, office equipment, electricity, library services, and vehicles. Payments to non-NASA entities under contracts, cooperative agreements, government agreements, and grants represented a large portion of program budgets. The HSR program budget had $1.00 in contracts and grants spending for every 52 cents of non-contract costs, meaning that approximately 2/3 of all spending was for payments under contracts or grants. US Comment on European Communities' response to question 148, paras. 164 & 171; US Comment on European Communities' response to question 158(h), para. 253; US Comment on European Communities' response to question 166, paras. 263 and 265.

[2643] (*footnote original*) See U.S. response to Question 334 ($12,365 million total, minus $130 million on the ACEE program, all of which predated 1989.

[2644] (*footnote original*) United States' response to question 175, para. 155.

> Article 1.1(a)(1) of the SCM Agreement,[2645] it could multiply the value of that portion by Boeing's 10.4 percent share of the total value of aeronautics research contracts, to estimate a value to Boeing. Because this approach is based on real data on NASA's expenditures, it would estimate Boeing's share of any NASA costs more accurately than the EC's approach based on Boeing's share of sales of civil aircraft and parts. The Panel could take a similar approach if it decided that some portion of the Institutional Expenses budget, which the EC alleges was $6,469 million in the 1989-2006 period, also constituted a financial contribution within its terms of reference."[2646] [2647]

7.1096 The Panel accepts the U.S. argument that if Boeing received only 10.4 per cent of payments made to all programme participants, there is no basis for allocating to Boeing more than 10.4 per cent of the total costs incurred by NASA in maintaining and providing facilities, equipment and employees for aeronautics R&D. In fact, the European Communities itself sought to estimate the value of NASA "facilities, equipment and employees" to Boeing based on Boeing's share of NASA funding. As the European Communities explained in its comments on the United States response to question 175:

> "... the US suggestion that the Panel use 'the Boeing share of payments made under contracts, cooperative agreements, grants, and government agreements to estimate the Boeing share of any overall provisions of goods and services' is analogous to the approach used by the European Communities in deriving its own estimates of the NASA R&D subsidies."

7.1097 More specifically, the European Communities has explained that it "allocates total aerospace institutional support" to Boeing "by using the percent of overall NASA aerospace/aeronautics funding" going to Boeing.[2648]

7.1098 In its comments on the United States' response to question 352, the European Communities argues that the Panel should not follow the United States' suggestion for estimating the value of the access to facilities, equipment and employees provided to Boeing under the NASA programmes at issue. The European Communities argues that

> "the US calculations that (i) Boeing's share of aeronautics research contracts under the programmes at issue is 10.4 per cent, (ii) the amount of the programme budgets that relate to aeronautics research contracts with Boeing is $775 million, (iii) the amount of the programme budgets that relate to total aeronautics research contracts is $7,446 million, and (iv) the amount of the programme budgets that do not relate to payments to contractors is $4,789 million, are not supported by any actual evidence".[2649]

[2645] (*footnote original*) The United States notes that any such valuation would have to take account of the fact that the large (but unsegregable) majority of NASA budgets not devoted to funding of contracts is used to fund NASA's own in-house research independent of contractors, with results disseminated to the broader public.

[2646] (*footnote original*) Any calculation attempting to relate NASA's non-contract costs to Boeing would have to avoid double counting the Space Act Agreements reported in Exhibit US-1256(revised). Any NASA contribution of employee time under those agreements is paid through the Institutional Support budget, while facilities or equipment would be paid through the relevant program budget.

[2647] United States' response to question 352, paras. 172-174.

[2648] "NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division", Exhibit EC-25, Note 2, p. 6.

[2649] European Communities' comments on United States' response to question 352, para. 142.

The Panel has already concluded, for the reasons given above, that the United States' calculations are supported by sufficient evidence.

7.1099 For the reasons given above, the Panel has estimated that the total amount of payments to Boeing through R&D contracts entered into under the eight R&D programmes over the period 1989-2006 is $1.05 billion. If the Panel were to use the $775 million figure advanced by the United States, this would mean that Boeing received 10.4 per cent of payments made under the programmes. Using the programme budget figures set out in the United States' response to question 352 (which are in turn derived from the figures submitted by the European Communities in Exhibit EC-25), this would yield an estimate of approximately $1.17 billion for "facilities, equipment and employees". However, the Panel has estimated that the value of the payments made to Boeing is $1.05 billion. When this figure is used, it leads to the conclusion that Boeing received 14 per cent, not 10.4 per cent, of payments made to programme participants. Using this figure, the Panel estimates that the value of the free access to facilities, equipment and employees under the eight R&D programmes at issue was $1.55 billion.

7.1100 As indicated above[2650], the Panel does not agree with the European Communities that the transactions are properly characterized as outright "grants". Among other things, the Panel accepts that NASA publicly disseminated the reports that summarized the results of the research conducted under the eight programmes at issue, and that this represents a situation in which Boeing has given up something of value in exchange for the funds and access to facilities, equipment and employees that it receives. The Panel agrees with the reasoning by the panel in *EC – DRAMs*:

> "In our view, there is a basic problem with the EC's grant methodology, and that is, simply put that a loan, a loan guarantee, a debt-to-equity swap that requires the recipient to repay the money or to surrender an ownership share in the company is not the same as a grant and can not reasonably be considered to have conferred the same benefit as the provision of funds without any such obligation. For the recipient, a loan clearly has a different value than a grant as it involves a debt that is owed to someone and will appear as such in a company's balance sheet. It is thus obviously less beneficial for a company to be given a loan than it is to be given a grant. Similarly, the issuance of new equity, directly or through a debt-to-equity swap dilutes the ownership claims of existing shareholders. We note that, in a benefit analysis, it is the perspective of the recipient that is important, not that of the provider of the financial contribution. In that sense, we find erroneous the starting point of the EC's calculation of the amount of benefit, which focuses on the expectation of the provider of the funds to see his money back. The question of benefit is not about the cost to the provider of the financial contribution, it is about the benefit to the recipient."[2651]

7.1101 Having said this, there are two reasons why we shall treat the full amount of the financial contributions provided to Boeing as a subsidy to Boeing's LCA division. First, this is a case involving claims of serious prejudice under Part III of the SCM Agreement, not a countervailing duty investigation. It is well established that in a case brought under Part III of the SCM Agreement, a panel is under no obligation to "quantify precisely the amount of the subsidy".[2652] Second, in

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[2650] See above, footnote 2552.

[2651] Panel Report, *EC – Countervailing Measures on DRAM Chips*, para. 7.212.

[2652] Appellate Body Report, *US – Upland Cotton*, para. 467 ("In sum, reading Article 6.3(c) in the context of Article 6.8 and Annex V suggests that a panel should have regard to the magnitude of the challenged subsidy and its relationship to prices of the product in the relevant market when analyzing whether the effect of a subsidy is significant price suppression. In many cases, it may be difficult to decide this question in the absence of such an assessment. Nevertheless, this does not mean that Article 6.3(c) imposes an obligation on

addition to this legal consideration, the United States has advanced no argument or evidence to support any alternative approach to calculating the amount of the subsidy to Boeing. In such circumstances, it is not for the Panel to invent its own calculation methodology.

7.1102 We turn now to an argument advanced by the European Communities that would, if accepted, render all of the foregoing irrelevant. Following its first and second written submissions, and in response to the United States' information and evidence regarding the maximum value of the payments and access to facilities, equipment and employees challenged, the European Communities advanced the argument that the amount of the payments and the value of free access to facilities, equipment and employees provided to Boeing was actually irrelevant. The European Communities argued, for the first time in response to a question from the Panel in the second set of questions, that this was because NASA shared the results of the R&D performed by other contractors and by NASA in-house with Boeing. Thus, the European Communities argued that the Panel should reject the U.S. information on the amount of the subsidies and accept the European Communities top down estimate, because the U.S. estimate did not account for the fact that NASA allegedly provided Boeing with access to the results of the R&D performed by these other contractors, and by NASA in-house. According to the European Communities:

> ".... NASA spent some of this funding on in-house LCA-related R&D activities, and shared the results (e.g. technologies and data) with Boeing, thereby providing goods and services to Boeing. Further, to the extent NASA spent some of this funding on R&D by entities such as military aircraft manufacturers or universities, it did so to bring about technologies for use on civil aircraft, and it made the results of that R&D available to Boeing, thereby also providing goods and services to Boeing. The bottom line is that *regardless of the precise recipient of the funding* under these programs, the non-engine civil aircraft components of this funding provided *support* to the US civil aircraft industry. ... {T}he purpose of the non-engine civil aircraft components of the other NASA programmes at issue was to develop technologies specifically for use by Boeing and other entities in the US civil aircraft industry, *regardless of the precise recipient of NASA's funding*"[2653]

7.1103 By way of background, we recall that in its first and second written submissions, the European Communities focused exclusively on the payments and the free access to facilities, equipment and employees that NASA provided to Boeing through R&D contracts and agreements for the purpose of enabling Boeing to conduct R&D. The European Communities argued that these were the two financial contributions provided to Boeing. It was in respect of these two alleged financial contributions, and only in respect of these two financial contributions, that the European Communities provided any analysis of the existence of a subsidy under Article 1 of the SCM Agreement. The European Communities sought to estimate the value of these two financial contributions. It argued that unless the United States provided complete information on the value of these two challenged financial contributions to Boeing, the Panel should adopt the European Communities' top down estimate of $10.4 billion.

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panels to quantify precisely the amount of a subsidy benefiting the product at issue in every case. A precise, definitive quantification of the subsidy is not required"). We note that Article VI:3 of the GATT 1994 and footnote 36 to Article 10 of the SCM Agreement provide that the term "countervailing duty" shall be understood to mean "a special duty levied for the purpose of offsetting any bounty or subsidy bestowed, directly, or indirectly, upon the manufacture, production or export of any merchandise". Article 19.4 of the SCM Agreement provides that no countervailing duty shall be levied on any imported product in excess of the amount of the subsidy found to exist "calculated in terms of subsidization per unit of the subsidized and exported product". These provisions do not apply in cases brought under Part III of the SCM Agreement. The reason is that cases brought under Part III of the SCM Agreement do not result in the imposition of countervailing duties.

[2653] European Communities' response to question 163, paras. 252-253 (emphasis added).

BCI deleted, as indicated **[***]**

7.1104 The United States subsequently provided the Panel with information, taken from contemporaneous NASA records and databases, regarding the maximum amount of the payments made to Boeing under the eight aeronautics R&D programmes at issue. The United States also provided the Panel with an estimate of the value of facilities, equipment and employees provided to Boeing, and submitted that the Panel could derive its own estimate based on Boeing's share of total payments.[2654] The United States explained that the remainder of the funding that the European Communities had included in its estimate of the subsidy to Boeing captured payments made to other programme participants, the cost of NASA's in-house research, and the cost of providing access to facilities, equipment and employees to third parties. The Panel put a large number of very detailed questions to the United States on how it arrived at these figures.[2655]

7.1105 Against this background, the Panel is not persuaded by the European Communities' argument that programme funding provided to other contractors (and funding used by NASA itself for in-house R&D) and programme funding used to cover the cost of providing facilities, equipment and employees to other contractors (and used by NASA itself for in-house R&D) should be included in the estimate of the amount of the subsidies provided to Boeing.

7.1106 First, the factual and legal arguments set out in the first and second written submissions of the European Communities to identify the particular measures which the European Communities considers to be subsidies within the meaning of Article 1 of the SCM Agreement do not include an allegation that NASA provides a financial contribution to Boeing in the form of early or exclusive access to the results of R&D performed by other programme participants. The "financial contributions" identified in the "legal considerations" section are clearly limited to "grants to Boeing's LCA division" and NASA's provision of "free access to facilities, equipment and employees" to Boeing.

7.1107 Second, the European Communities does not identify the particular transactions or types of transactions through which NASA provides to the U.S. civil aircraft industry access to the results of research performed by entities outside that industry. In this regard, the Panel notes that the one technology transfer mechanism on which the European Communities has actually provided detailed information in this case – the allocation of intellectual property rights under NASA R&D contracts and agreements – concerns the transfer of technology from the government *to the entity that performed the research*. To take the case of patent rights, it is the entity that performs the research (whether it is Boeing, a third party, etc.) that takes title to patents (with a limited government-purpose license granted to the U.S. Government). As the European Communities correctly notes, a patent right accords the rights to "*exclude others* from making, using, offering for sale, or selling" the invention for a minimum of 20 years from date of application.[2656] Likewise, the European Communities' arguments relating to Limited Exclusive Data Rights (LERD) clauses focus

[2654] The United States acknowledged that its $80 million estimate only covered the amount of access to facilities, equipment and employees provided to Boeing under Space Act Agreements, and did not include the value of any such goods and services provided to Boeing through R&D contracts. The United States argued that its $80 million estimate was substantially accurate though, because as the European Communities itself recognized, the "bulk" (European Communities' second written submission, para. 389) of the free access to facilities, equipment and employees was provided to Boeing through Space Act Agreements. The United States submitted, however, that because the value of the facilities, equipment and employees could not be determined with the same degree of precision and certainty as the value of the payments made to Boeing, an alternative way of estimating the cost of the access to facilities, equipment and employees granted to Boeing would be to arrive at an estimate based on Boeing's share of total payments made. See e.g. United States' response to questions 175 and 352).

[2655] The questions to the United States on this issue include Questions 6, 7, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 351, 352, and 353.

[2656] European Communities' first written submission, para. 812 (emphasis added).

on the "critical commercial data *developed by Boeing* through NASA-funded research were protected pursuant to the LERD restrictions".[2657]

7.1108 Third, the logic of an argument that NASA's R&D funding to other entities is a subsidy to Boeing is fundamentally incompatible with the logic of the principal argument of the European Communities in its first and second written submissions, namely that through R&D contracts NASA pays Boeing to conduct R&D that is principally for its own benefit and use. The allocation of the entire amount of the R&D funding as a subsidy to entities other than the entity that performs the research necessarily implies that the R&D funding is not principally for the benefit and use of the entity that performs the R&D, i.e. is not a subsidy to the entity that performs the research.

7.1109 For these reasons, the Panel estimates that the amount of the subsidy provided to Boeing's LCA division in the form of payments under R&D contracts is **$1.05 billion** over the period 1989-2006, and that the amount of the subsidy provided to Boeing's LCA division in the form of access to NASA facilities, equipment and employees under R&D contracts and agreements is **$1.55 billion** over this same period. Thus, the Panel estimates that the total amount of the subsidy provided to Boeing's LCA division through the eight R&D programmes at issue is **$2.6 billion**.

(f) Conclusion

7.1110 **For these reasons, the Panel finds that the payments and access to facilities, equipment and employees that NASA provided to Boeing through the eight aeronautics R&D programmes at issue constitute specific subsidies within the meaning of Articles 1 and 2, and estimates that the amount of the subsidy to Boeing's LCA division is $2.6 billion over the period 1989-2006.**

6. Department of Defense (DOD) aeronautics R&D

(a) Introduction

7.1111 The European Communities argues that DOD makes payments to Boeing (and grants Boeing access to facilities, equipment and employees) to perform R&D related to "dual-use" technologies – i.e. technologies applicable to both military and commercial aircraft. The European Communities argues that these payments (and access to facilities, equipment and employees) are subsidies within the meaning of Article 1 of the SCM Agreement, and are specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that DOD provided $4.3 billion in "dual use" funding to Boeing over the period 1991-2006, and argues that $2.4 billion of that total should be treated as a subsidy to Boeing's LCA division.[2658]

7.1112 The United States argues that DOD R&D contracts and agreements with Boeing are not subsidies within the meaning of Article 1 of the SCM Agreement, and are not specific within the meaning of Article 2 of the SCM Agreement. In addition, the United States argues that the European Communities has overestimated the amount of "dual use" research conducted under the programmes at issue. According to the United States, the total amount of payments made to Boeing under DOD R&D contracts and agreements to perform R&D with even theoretical "dual uses" was only $308 million.

[2657] European Communities' first written submission, para. 838 (emphasis added).
[2658] NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division, Exhibit EC-25, p. 20.

BCI deleted, as indicated **[***]**

(b) The measures at issue

7.1113 The pertinent items of the European Communities' panel request[2659] read as follows:

> "a. allowing the US LCA industry to participate in DOD-funded research, making payments to the US LCA industry for such research, or enabling the US LCA industry to exploit the results of such research, by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research, through, for example:
>
> (i) A number of Research, Development, Test, and Evaluation ("RDT&E") Programs of the US Air Force, Navy, Army, and the Defense Advanced Research Projects Agency ("DARPA") including, but not limited to:
>
> - Defense Research Sciences (PE# 0601102F)
> - Materials (PE# 0602102F)
> - Aerospace Flight Dynamics and Aerospace Vehicle Technologies (PE# 0602201F)
> - Aerospace Propulsion (PE# 0602203F)
> - Aerospace Sensors (PE# 0602204F)
> - Dual Use Applications and Dual Use Science & Technology (PE# 0602805F)
> - Advanced Materials for Weapon Systems (PE# 0603112F)
> - Flight Vehicle Technology (PE# 0603205F)
> - Aerospace Structures and Aerospace Technology Dev/Demo (PE# 0603211F)
> - Aerospace Propulsion & Power Technology (PE# 0603216F)
> - Flight Vehicle Technology Integration (PE# 0603245F)
> - RDT&E For Aging Aircraft (PE# 0605011F)
> - Manufacturing Technology/Industrial Preparedness (PE# 0603771F/0708011F/0708011N)
> - C-17 (PE# 0401130F/0604231F)
> - CV-22 (PE# 0401318F)
> - Joint Strike Fighter (PE#0603800F/0603800N/0603800E/0604800F/0604800N)
> - AV-8B Aircraft (PE# 0604214N)
> - Comanche (PE# 0604223A)
> - F-22 (PE# 0604239F)
> - B-2 Advanced Technology Bomber (PE# 0604240F)
> - V-22 (PE# 0604262N)
> - A-6 Squadrons (PE# 0204134N)
> - F/A-18 Squadrons (PE# 0204136N)
> - Dual Use Applications Program (including its predecessor, the Technology Reinvestment Project).
>
> ...
>
> b. allowing the US LCA industry to use research, test and evaluation facilities owned by the US Government, including the Major Range Test Facility Bases."

[2659] WT/DS353/2, item 3(a) and 3(b), pp. 9-10.

BCI deleted, as indicated **[***]**

7.1114 The European Communities distinguishes "general aircraft" RDT&E programmes from "military aircraft" RDT&E programmes:

- "**general aircraft" RDT&E programmes:** Defense Research Sciences (PE# 0601102F), Materials (PE# 0602102F), Aerospace Flight Dynamics and Aerospace Vehicle Technologies (PE# 0602201F), Aerospace Propulsion (PE# 0602203F), Aerospace Sensors (PE# 0602204F), Dual Use Applications and Dual Use Science & Technology (PE# 0602805F), Advanced Materials for Weapon Systems (PE# 0603112F), Flight Vehicle Technology (PE# 0603205F), Aerospace Structures and Aerospace Technology Dev/Demo (PE# 0603211F), Aerospace Propulsion & Power Technology (PE# 0603216F), Flight Vehicle Technology Integration (PE# 0603245F), RDT&E For Aging Aircraft (PE# 0605011F), and Manufacturing Technology/Industrial Preparedness (PE# 0603771F/0708011F/0708011N); and

- "**military aircraft" RDT&E programmes**[2660]: CV-22 (PE# 0401318F), V-22 (PE# 0604262N), and F/A-18 Squadrons (PE# 0204136N), Joint Strike Fighter (PE#0603800F / 0603800N / 0603800E / 0604800F / 0604800N), C-17 (PE# 0401130F/0604231F).

7.1115 It is not in dispute that DOD made payments to Boeing (and granted Boeing access to government facilities) to perform R&D pursuant to two different categories of R&D arrangements. First, DOD entered into "procurement contracts" with Boeing, the stated purpose of which was to acquire goods or services for the "*direct benefit or use* of the United States Government". Second, DOD entered into different types of "assistance instruments" (including cooperative agreements, technology investment agreements, and certain other transactions) with Boeing, the stated purpose of which was "*to transfer a thing of value to the recipient ... instead* of acquiring property or services for the direct benefit or use of the United States Government". In this Report, we use the expression "DOD R&D contracts" to mean DOD's procurement contracts with Boeing under the 23 aeronautics R&D programmes at issue, "agreements" to mean DOD assistance instruments with Boeing under the 23 aeronautics R&D programmes at issue, and "DOD R&D contracts and agreements" to cover both.

7.1116 The scope of the European Communities' claim relating to DOD R&D measures is clear: it challenges the payments (and access to facilities) provided to Boeing through R&D contracts and agreements entered into under the 23 programmes identified in the European Communities' panel request. The scope of the European Communities claim is relatively narrow in several respects.

[2660] The European Communities challenges funding provided to Boeing under 13 "general aircraft" programmes, and under 10 "military aircraft" programmes. However, of the 10 military aircraft programmes identified in the European Communities' Panel Request (WT/DS353/2), and para. 677 of its first written submission, only five are discussed in CRA International, U.S. Department of Defense (DoD) Research, Development, Test and Evaluation (RDT&E) Funding Support to The Boeing Company for Dual-Use Aircraft R&D, November 2006, Exhibit EC-7. CRA's estimate of the funding provided to Boeing under the DOD military aircraft programmes, adopted by the European Communities in its submissions, is limited to these five military aircraft programmes. At footnote 16 of its report, CRA indicates that:

> "Other RDT&E PEs related to military aircraft, such as the F-22, B-2, Comanche, A-6, and AV-8B, likely also contributed dual-use LCA technologies to Boeing, but CRA was unable to find adequate publicly available information to allow it to provide a high-fidelity estimate of the amount of dual-use aircraft-related RDT&E funding to Boeing from these PEs. Thus, it chose to focus its analysis on the V-22 / CV-22, F/A-18, JSF and C-17."

The European Communities has also "focused" its analysis on these five military aircraft programmes: following a separate discussion of each of the five military aircraft programmes analysed in the CRA report, the European Communities briefly discusses "other military aircraft" programmes at paras. 721-723 of its first written submission.

BCI deleted, as indicated **[***]**

7.1117 First, the European Communities does not challenge the RDT&E Program as a whole. Rather, it challenges only certain funding provided to Boeing under the 23 RDT&E programmes at issue. In addition, the European Communities does not challenge all of the funding that Boeing received under these 23 programmes. Rather, it challenges only the subset of funding that is, in the European Communities' view, related to "dual use" technologies.

7.1118 Second, the European Communities' challenge is limited to the "payments" (and, as discussed further below, access to government "facilities") that DOD provided to Boeing for the purpose of performing R&D – it does not challenge DOD's *purchase* of military aircraft from Boeing. In its panel request, the European Communities does refer to DOD "entering into procurement contracts, including those for the purchase of goods, from the US LCA industry for more than adequate remuneration ...".[2661] However, the European Communities did not subsequently advance arguments or evidence on DOD's purchases of aircraft or other goods.[2662] For example, the European Communities has not provided the Panel with any information regarding the price that DOD paid Boeing for the articles specified in this item of its panel request.

7.1119 Third, the scope of the European Communities claim is clearly limited to payments (and access to facilities) provided to Boeing – as distinguished from a broader challenge to the DOD R&D programmes *per se*, and as distinguished from a challenge to a subsidy provided to a broader industry, e.g. the U.S. military aircraft industry. This is made clear by many aspects of the European Communities' argumentation, including but not limited to the methodology followed by CRA in its 96-page report that seeks to estimate "the amount of Research, Development, Test and Evaluation ("RDT&E") funding received by The Boeing Company ("Boeing") from the United States Department of Defense ("DOD") that can be considered relevant to both military and commercial aircraft (i.e. "dual-use" RDT&E)".[2663]

[2661] WT/DS353/2, p. 11 ("entering into procurement contracts, including those for the purchase of goods, from the US LCA industry for more than adequate remuneration, including in particular but not limited to the US Air Force contract with Boeing for the purchase of certain spare parts for its Airborne Warning and Control System (AWACS) aircraft, the National Polar-orbiting Operational Environmental Satellite System-Conical Microwave Imager Sensor, the C-22 Replacement Program (C-40), the KC-135 Programmed Depot Maintenance, the C-40 Lease and Purchase Program, the C-130 avionics modernisation upgrade program, the C-17 H22 contract (Boeing BC-17X), the US Navy contract with Boeing for the production and maintenance of 108 civil B-737 and their conversion into long-range submarine hunter Multi-Mission Aircraft, the Missile Defense Agency's Airborne Laser (ABL) Program, and the Army's Comanche Program").

[2662] In its submissions, the European Communities makes certain observations and assertions related to DOD's purchases of aircraft from Boeing. However, the European Communities does not advance any claim in this regard. See e.g. European Communities' first written submission, paras. 658-662, discussing the "close and cosy relationship between the DOD and Boeing".

[2663] CRA International, U.S. Department of Defense (DoD) Research, Development, Test and Evaluation (RDT&E) Funding Support to The Boeing Company for Dual-Use Aircraft R&D, November 2006, Exhibit EC-7, p. 1.

BCI deleted, as indicated **[***]**

7.1120 Finally, whereas the scope of the European Communities' claim relating to NASA R&D covers NASA "facilities, equipment and employees", the scope of the European Communities' claim relating to DOD only covers DOD "facilities". As with NASA aeronautics R&D, the European Communities has advanced arguments regarding DOD "facilities, equipment and employees".[2664] Unlike NASA R&D, however, the European Communities' panel request only identifies DOD "facilities", and not DOD "equipment" and/or "employees". To illustrate the differences, we provide a side-by-side comparison of the pertinent items of the European Communities' panel request regarding NASA and DOD R&D:

"**2. NASA Subsidies**	"**3. Department of Defense Subsidies**
b. providing the services of NASA employees, facilities, and equipment to support the R&D programmes listed above and paying salaries, personnel costs, and other institutional support, thereby providing valuable services to the US LCA industry on terms more favourable than available on the market or not at arm's length d. allowing the US LCA industry to use the research, test and evaluation facilities owned by the US Government, including NASA wind tunnels, in particular the Langley Research Center."	b. allowing the US LCA industry to use research, test and evaluation facilities owned by the US Government, including the Major Range Test Facility Bases"

7.1121 Article 6.2 of the DSU provides that a panel request must "*identify the specific measures at issue* and provide a brief summary of the legal basis of the complaint sufficient to present the problem clearly". To the extent that a measure is not identified in the complaining party's panel request, that measure falls outside of the scope of the panel's terms of reference.

7.1122 In response to a question from the Panel, the European Communities has clarified that it does not challenge DOD allowing Boeing to "participate" in research programmes as a distinct measure.[2665] With respect to DOD "enabling the US LCA industry to exploit the results of such research, by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research", the European Communities addresses these measures primarily in the sections of its submissions regarding "NASA/DOD Intellectual Property Rights Transfers/Waivers".[2666]

7.1123 We discuss the challenged measures in greater detail in the context of our evaluation of whether these measures constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement, and in the context of estimating the amount of any subsidy to Boeing's LCA division.

[2664] European Communities' first written submission, paras. 762, 895 and 896-901; European Communities' second written submission, paras. 496-510.
[2665] European Communities' response to question 149.
[2666] European Communities' response to question 215.

BCI deleted, as indicated **[***]**

(c) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

7.1124 In this section, we address whether the payments and access to facilities that DOD provided to Boeing under the 23 RDT&E programmes at issue constitute a subsidy within the meaning of Article 1 of the SCM Agreement. We begin by addressing the question of whether the transactions involve a financial contribution covered by Article 1.1(a)(1) of the SCM Agreement. We have already concluded that transactions properly characterized as "purchases of services" are excluded from the scope of Article 1.1(a)(1).[2667] Thus, the main issue addressed here is whether DOD's R&D contracts and agreements with Boeing are in fact properly characterized as "purchases of services". If we find that the challenge measures are not properly characterized as "purchases of services" and therefore provide financial contributions to Boeing, we will then address the question of whether those financial contributions are provided on terms that confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

(i) Whether there is a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement

Arguments of the European Communities

7.1125 In the introduction to the section of its first written submission addressing NASA, DOD and DOC aeronautics R&D, the European Communities asserts in general terms that "NASA and DOD generally provide funding for LCA-related R&D through what they call 'contracts', but what are in reality grants to Boeing/MD for LCA-related R&D expenses".[2668] In the section of its first written submission addressing DOD R&D in particular, the European Communities argues that DOD, directly transfers funds in the form of "grants" to Boeing to support dual-use aeronautics research, and that this "direct R&D funding" constitutes a financial contribution within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.[2669]

7.1126 The European Communities argues that DOD also dedicates federal personnel and research facilities to support the RDT&E programmes, and that the Government's provision of these goods and services constitutes a financial contribution within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[2670]

7.1127 In its second written submission, the European Communities responds to the United States' argument that DOD's RDT&E contracts with Boeing constitute "purchases of services" and therefore are not financial contributions within the meaning of Article 1.1(a)(1) of the SCM Agreement. The European Communities argues that it would circumvent the object and purpose of the SCM Agreement if DOD RDT&E contracts were considered to be entirely excluded from the definition of financial contribution in Article 1.1(a)(1) of the SCM Agreement based on the United States labelling them as "purchases of services". The European Communities argues that DOD RDT&E contracts have helped Boeing develop technology that it utilizes toward its LCA. The European Communities argues that DOD RDT&E contracts are not properly characterised as "purchases of services" for the reasons set out in its responses to questions 15, 16, 19 and 20.[2671] The European Communities also argues that DOD's transfers of funds to Boeing for RDT&E "in fact relate to DOD's purchase of *goods*" – i.e. the military aircraft and other defence systems that DOD ultimately procures".[2672] The European Communities explains that while a commercial customer of a

[2667] See above, para. 7.970 of this Report.
[2668] European Communities' first written submission, para. 457.
[2669] European Communities' first written submission, para. 762.
[2670] European Communities' first written submission, para. 762.
[2671] European Communities' second written submission, para. 457.
[2672] European Communities' second written submission, para. 454 (emphasis added).

good would pay for R&D costs and acquisition costs through one purchase price, DOD pays these costs separately by first transferring funds for R&D through its RDT&E budgets, and then procuring a related aircraft or defence system through its procurement budgets.[2673]

7.1128 In its response to Panel question 15, the European Communities argues that DOD RDT&E contracts are not properly characterized as "purchases of services" for four reasons. First, because "DOD RDT&E contracts do not ultimately aim at the acquisition of a service for the direct benefit and own use of the government". Rather, the European Communities argues, "the ultimate purpose of DOD RDT&E is not the purchase of services, but rather the purchase of goods – i.e. military aircraft and other defence systems".[2674] Second, because "DOD RDT&E contracts do not contain the typical elements of a purchase". In this regard, the European Communities argues among other things that under the cooperative agreements entered into between Boeing, "DOD does not receive the entire fruits of the labour generated with DOD's resources pursuant to these agreements. ... Boeing does not make a profit pursuant to these agreements, while the seller in a typical 'purchase' transaction would undoubtedly expect to make a profit."[2675] Third, because "DOD RDT&E contracts do not exclusively affect trade in services". In this regard, the European Communities again argues that the DOD RDT&E contracts "ultimately aim at the purchase of military aircraft and other defence systems, necessarily implying the production of goods" and that "the transactions are directly related to the manufacture of goods, affect trade in goods, and therefore cannot properly be characterised as 'purchases of services'".[2676] Finally, because "Boeing is not a genuine provider of LCA-related R&D services". In this regard, the European Communities argues that "Boeing does not offer such R&D services to anybody else but NASA and DOD" and that "Boeing has not advertised itself as a service provider for LCA-related R&D in the market".[2677]

7.1129 With respect to the alleged provision of goods and services, the European Communities responds to the United States' argument that the European Communities has failed to provide any specific evidence that DOD grants Boeing access to DOD facilities, equipment and employees. In its second written submission, the European Communities points to several contracts and agreements through which Boeing received the "rent-free use of facilities".[2678]

Arguments of the United States

7.1130 In its first written submission, the United States argues that the contracts submitted by the European Communities "show conclusively that under these instruments, DoD purchased research services from Boeing". The United States argues that the further contracts and agreements included among the U.S. exhibits support the same conclusion. According to the United States, research is a service, which accordingly makes these contracts purchases of services. Purchases of services are not financial contributions for purposes of Article 1.1(a)(1). Therefore, the only evidence on the Panel record regarding the nature of these transactions establishes that they are not a financial contribution, and that no subsidy exists. The United States submits that the Panel's review of the entire issue should end there.[2679]

7.1131 The United States observes that "{u}nder U.S. government contracting law, some of these instruments are formally termed 'contracts,' and others 'other transactions', 'cooperative agreements',

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[2673] European Communities' second written submission, para. 455.
[2674] European Communities' response to question 15(c), para. 62.
[2675] European Communities' response to question 15(c), and European Communities' comments on United States' response to question 20(a), para. 75.
[2676] European Communities' response to question 15(c), para. 66.
[2677] European Communities' response to question 15(c), para. 67.
[2678] European Communities' second written submission, para. 500.
[2679] United States' first written submission, para. 90.

or 'technology investment agreements'".[2680] The United States notes that some of the "contracts" submitted by the European Communities are "procurement contracts", and some are "cooperative agreements, technology investment agreements, or other transactions".[2681] The United States acknowledges that contracts are used only when the "principal purpose" is the acquisition of supplies or services for the "direct benefit or use" of the federal government, and that an "agreement" will "often have a clause specifying that its principal purpose is not the acquisition of goods or services for direct use by the U.S. government". However, the United States asserts that such a clause only "reflects that the contract does not have as its immediate goal the development of a particular technology for a particular weapon system" and "is not meant to reflect on the nature of the effort by the private party". The United States argues that "in any event, the Appellate Body has found that "municipal law classifications are not determinative" as to whether a measure is a financial contribution.[2682]

7.1132 The United States then sets out some of the similarities and differences between these two different types of transactions.[2683] The United States concludes that in respect of all of the contracts and agreements, "it is clear that the government is not providing a grant to the contractor and is, instead, engaging the contractor to perform research of interest to the government for government purposes".[2684] The United States argues that "Research and Development" is widely recognized as a "service".[2685]

7.1133 In its second written submission, the United States reiterates that "the contracts make clear that what DOD purchased was Boeing's RDT&E services, a transaction that is not a financial contribution within the meaning of Article 1.1 of the SCM Agreement".[2686] It then responds to several arguments advanced by the European Communities in its oral statement at the first meeting with the Panel. First, the United States responds to the European Communities' argument that the contracts are not properly characterized as purchases of services because DOD R&D "benefits Boeing's commercial division".[2687] The United States responds that the European Communities' theory mixes two concepts that are separate under the SCM Agreement – financial contribution and benefit. The identification of a financial contribution under Article 1.1(a)(1) depends on the type of the transaction that allegedly confers a subsidy. The question of whether there is a benefit comes only *after* the establishment of a financial contribution. Thus, the EC's assertion that technologies researched under some contracts have civil application is irrelevant to a determination of whether the contracts convey a financial contribution in the first place.[2688]

7.1134 Second, the United States responds to the European Communities' reference to the fact that some of the contracts and agreements contain statements to the effect that "the principal purpose of this agreement is for *the government to support and stimulate the recipient* to provide reasonable efforts in advanced research and technology development and *not for the acquisition of property or services for the direct benefit or use of the government*".[2689] The United States responds by noting,

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[2680] United States' first written submission, footnote 75.
[2681] United States' first written submission, para. 91.
[2682] United States' first written submission, footnote 100 (citing Appellate Body Report, *US – Softwood Lumber IV*, para. 56.)
[2683] United States' first written submission, paras. 91-92 and 96-97.
[2684] United States' first written submission, para. 92.
[2685] United States' first written submission, para. 95.
[2686] United States' second written submission, para. 31.
[2687] European Communities' oral statement at the first meeting with the Panel, para. 12.
[2688] United States' second written submission, para. 32.
[2689] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 70 (emphasis original), citing F33615-95-2-5019 with McDonnell Douglas regarding Affordable Tooling for Rapid Prototyping and Limited Production of Composite Structures, 1 February 1995, Exhibit EC-512, Article 2.C.

among other things, that "{t}he document cited by the EC (and others containing similar statements) are cooperative agreements, technology investment agreements, or 'other transactions,'...".[2690]

7.1135 Finally, the United States responds to the European Communities' argument that "DoD's ultimate aim is to purchase *goods* – i.e. the military aircraft and other defense systems eventually purchased by DoD".[2691] The United States argues that the ultimate aim of a purchase "does not change the nature of the item purchased", and provides the examples of a manufacturer hiring an advertising agency to create a marketing campaign to sell a new good (which does not make the advertising service into a good), and the example of a company buying picks and shovels for a contractor to use in landscaping (which does not make the picks and shovels into a service). The United States concludes that the "R&D services contracts are discrete transactions that cannot be equated with any goods that may result".[2692]

Evaluation by the Panel

7.1136 It is not in dispute that DOD made payments to Boeing and granted Boeing access to DOD facilities pursuant to aeronautics R&D contracts and agreements.[2693] Having concluded that purchases of services are excluded from the scope of Article 1.1(a)(1)[2694], the question before the Panel is whether DOD R&D contracts and agreements are properly characterized as "purchases of services". As the Appellate Body has recognized, "{a}n evaluation of the existence of a financial contribution involves consideration of the *nature of the transaction* through which something of economic value is transferred by a government".[2695] In this case, the Panel's task is to reach a conclusion regarding the nature of DOD's aeronautics R&D contracts and agreements with Boeing.

7.1137 For the reasons already given above[2696], the Panel considers that whether or not DOD's R&D contracts and agreements with Boeing are properly characterized as a "purchase of services" depends on *the nature of the work* that Boeing was required to perform under the contracts, and more specifically, *whether the R&D that Boeing was required to conduct was principally for its own benefit and use, or whether it was principally for the benefit and use of the U.S. Government (or unrelated third parties*). As with its analysis of NASA aeronautics R&D, the Panel considers that it should review all of the evidence that sheds light on this issue. Again, the Panel sees no reason why, for example, the type of instrument and so-called "formal" features of the transaction would be disregarded *if* they shed light on the nature of the R&D activities required of Boeing under the

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[2690] United States' second written submission, para. 34.

[2691] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 70 (emphasis added).

[2692] United States' second written submission, para. 35.

[2693] In its first written submission, the United States argues that the European Communities failed to provide any specific evidence that DOD grants Boeing access to DOD facilities. (United States' first written submission, para. 177.) However, the United States does not actually deny that DOD does so, and even refers the Panel to several such instances under Agreements F33615-97-2-3400 and F33615-98-3-5104. (United States' first written submission, para. 179.) In its second written submission, the European Communities points to several contracts and agreements through which Boeing received the "rent-free use of facilities". (European Communities' second written submission, para. 500, citing: F33615-94-C-3400: Extended Life Tire (EXLITE) Batch Queue Capability and Grid Generation Enhancements for 3-Dimensional Design Optimization, Exhibit US-622 (HSBI), clause 15; F33615-98-2-5113: Structural Repair of Aging Aircraft (1 of 2), Exhibit US-636 (HSBI), Article 32; F33615-96-C-1958: Low Cost Insertion of Commercial Technology into Legacy Aircraft, Exhibit US-618 (HSBI), clause 16.)

[2694] See above, paras. 7.953-7.970

[2695] Appellate Body Report, *US – Softwood Lumber IV*, para. 52 (emphasis added). The "nature" of something is generally defined as the basic or inherent features, character or quality of something; *Oxford Dictionary of English*, 2ed (rev), 2005, p. 1172.

[2696] See above, para. 7.978.

contracts and agreements; there is likewise no reason why, for example, evidence of the purpose and motives of the programmes under which they were entered into would be disregarded *if* they shed light on the question on the nature of the R&D activities required of Boeing under the contracts and agreements. In both cases, they are not extraneous features divorced from the "terms" of the transactions; rather, they could be central to understanding the core *term* of the transaction. That is, this is evidence that could be very helpful in understanding whether the nature of the work performed under Boeing's R&D contracts and agreements with DOD (the core terms of the transactions) was principally for the U.S. Government's benefit or use (and/or for the benefit or use of unrelated third parties), or rather for Boeing's own benefit or use. That is the question that needs to be answered for the purpose of determining whether the transactions are properly characterized as purchases of services.

7.1138 More specifically, the Panel will consider, *inter alia*, the legislation authorizing the programmes at issue, the types of instruments entered into between DOD and Boeing, whether DOD has any demonstrable use for the R&D performed under these programmes, the allocation of intellectual property rights under these transactions, and whether the transactions at issue had the typical elements of a "purchase of services".

7.1139 When considered in its totality, the evidence relating to DOD aeronautics R&D, some of which is individually discussed below, leads to the conclusion that *some* of the work that Boeing performed under its aeronautics R&D contracts and agreements with DOD was principally for its *own* benefit or use, rather than for the benefit or use of the U.S. Government (or unrelated third parties), and that *some* of the work that Boeing performed under its aeronautics R&D contracts and agreements with DOD was principally for the benefit or use of the U.S. Government (or unrelated third parties). A transaction in which the work performed is principally for the benefit and use of the "seller" cannot properly be characterized as a "purchase of services". Accordingly, the Panel concludes that some of DOD's R&D contracts and agreements with Boeing are not properly characterized as "purchases of services", whereas others are. Thus, the Panel rejects the European Communities' position that none of the DOD R&D contracts and agreements at issue are properly characterized as "purchases of services", and we reject the United States' position that all of the DOD R&D contracts and agreements at issue are properly characterized as purchases of services.

7.1140 We begin with the legislation authorizing the programmes and transactions at issue. 10 U.S.C. § 2358[2697] is the general statutory authority for all research and development (R&D) in which DOD engages by "contract", "grant", or "cooperative agreement".[2698] Section 2358 states:

> "§ 2358. Research and development projects
>
> (a) Authority.— The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that—
>
> (1) are necessary to the responsibilities of such Secretary's department in the field of research and development; and
>
> (2) either —

[2697] 10 U.S.C. (Armed Forces), Sub-Part A (General Military Law), Part IV (Service, Supply and Procurement), Chapter 139 (Research and Development), § 2358, Exhibit US-1205.

[2698] See United States' response to question 20(a). The United States explains that 10 U.S.C. § 2371 is the authority for R&D projects using "other transactions", that is, transactions other than contracts, cooperative agreements, and grants.

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(A) relate to weapon systems and other military needs; or

(B) are of potential interest to the Department of Defense.

(b) Authorized Means.--The Secretary of Defense or the Secretary of a military department may perform research and development projects—

(1) by contract, cooperative agreement, or grant, in accordance with chapter 63 of title 31;

(2) through one or more military departments;

(3) by using employees and consultants of the Department of Defense; or

(4) by mutual agreement with the head of any other department or agency of the Federal Government.

(c) Requirement of Potential Department of Defense Interest.--Funds appropriated to the Department of Defense or to a military department may not be used to finance any research project or study unless the project or study is, in the opinion of the Secretary of Defense or the Secretary of that military department, respectively, of potential interest to the Department of Defense or to such military department, respectively.

(d) Additional Provisions Applicable to Cooperative Agreements.-- Additional authorities, conditions, and requirements relating to certain cooperative agreements authorized by this section are provided in sections 2371 and 2371a of this title."

7.1141 Thus, section 2358 gives DOD authority to fund certain kinds of R&D (§ 2358(a)), identifies "contracts", "cooperative agreements", and "grants" as the different means through which DOD can generally provide funding to perform R&D (§ 2358(b)), requires that any R&D funded be of "potential interest" to DOD (§ 2358(c)), and identifies the special and additional rules that apply to R&D funded through the means of "cooperative agreements" (§ 2358(d)) as distinguished from "contracts". Sections 2371 and 2371a, referenced above in § 2358(d), authorized the use of certain "other transactions".

7.1142 We turn now to the different types of instruments entered into between DOD and Boeing. The DOD Grant and Agreement Regulations are set forth in Sub-Chapter C (Parts 21 to 37) of 32 C.F.R. Part 21 of the DOD Grant and Agreement Regulations sets forth general policies and procedures related to "assistance and certain other nonprocurement instruments" that are subject to the Grant and Agreement Regulations (§ 21.100(b)). These "assistance" and "other nonprocurement instruments" are defined to include "grants, cooperative agreements, and technology investment agreements", as well as certain other "nonprocurement instruments" (§ 21.205(a) and (b)). Subpart F of Chapter 21 defines certain terms:

"§ 21.605 *Acquisition*

The acquiring (by purchase, lease, or barter) of property or services for the *direct benefit or use* of the United States Government (see more detailed definition at 48 CFR 2.101). In accordance with 31 U.S.C. 6303, *procurement contracts* are the appropriate legal instruments for acquiring such property or services.

...

BCI deleted, as indicated **[***]**

> § 21.615 *Assistance*.
>
> The *transfer of a thing of value* to a recipient to carry out a public purpose of support or stimulation authorized by a law of the United States (see 31 U.S.C. 6101(3)). *Grants, cooperative agreements, and technology investment agreements* are examples of legal instruments used to provide assistance.
>
> ...
>
> § 21.640 *Cooperative agreement.*
>
> A legal instrument which, consistent with 31 U.S.C. 6305, is used to enter into the *same kind of relationship as a grant* (see definition "grant"), except that substantial involvement is expected between the Department of Defense and the recipient when carrying out the activity contemplated by the cooperative agreement. The term does not include "cooperative research and development agreements" as defined in 15 U.S.C. 3710a.
>
> § 21.670 Procurement contract.
>
> A legal instrument which, consistent with 31 U.S.C. 6303, reflects a relationship between the Federal Government and a State, a local government, or other recipient when the *principal purpose* of the instrument is to acquire property or services for the *direct benefit or use* of the Federal Government. See the more detailed definition for contract at 48 CFR 2.101."[2699]
>
> (emphasis added)

7.1143 32 CFR part 37 (i.e. a part of the DOD *Grant and Agreement Regulations*) is entitled "Technology investment agreements". § 37.205 provides that a TIA may be used where the "grants officer" concludes:

> "... that the *principal purpose* of the project is stimulation or support of research (*i.e., assistance*), *rather than acquiring goods or services for the benefit* of the Government (*i.e.,* acquisition)". (emphasis added)

7.1144 §22.205[2700] of the *DOD Grant and Agreement Regulations* ("Distinguishing assistance from procurement") provides, in accordance with 31 U.S.C. chapter 63, that before using a "grant or cooperative agreement", the "grants officer" must make a positive judgment that an "assistance instrument", rather than a procurement contract, is the appropriate instrument. More specifically:

> "the grants officer must judge that the *principal purpose* of the activity to be carried out under the instrument is to stimulate or support a public purpose (i.e., to provide assistance), rather than acquisition (i.e., to acquire goods and services for the direct benefit of the United States Government). If the principal purpose is acquisition, then the grants officer shall judge that a procurement contract is the appropriate instrument" (§22.205(a)(1)). (emphasis added)

7.1145 All of the instruments submitted to the Panel clearly indicate, on the title page, whether they are a "Contract", a "Cooperative Agreement", a "Technology Investment Agreement", or an "Other

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[2699] The text of 48 CFR 2.101 has already been reproduced above.
[2700] 32 CFR § 22.205, Exhibit US-22.

Transaction". Some of the DOD cooperative agreements with Boeing submitted by the European Communities contain a clause within the agreement itself that explicitly states:

> "This agreement is a 'Cooperative Agreement' under 10 USC 2358 (Pursuant to 10 USC2371). The parties agree that the principal purpose of this agreement is for the government to support and stimulate the recipient to provide reasonable efforts in advanced research and technology development and not for the acquisition of property or services for the direct benefit or use of the government. The Federal Acquisition Regulation (FAR) and Department of Defense FAR Supplement (DFARS) apply only as specifically referenced herein. This is not a procurement contract." (see F33615-95-2-5019 (EC-512) and F33615-96-2-5051 (EC-513))

7.1146 All of the cooperative agreements, TIAs, and "other transactions" submitted by the European Communities repeatedly and consistently use the terminology of "Grants Officer" and "Grants Administration Office". All of these instruments (like the corresponding regulations above) refer to the other party as the "recipient", and not a "contractor".

7.1147 We turn now to an examination of whether DOD has any demonstrable use for the R&D performed under the 23 programmes at issue. Unlike NASA aeronautics R&D programmes, the declared purposes of the DOD programmes at issue do not generally demonstrate that DOD aimed to transfer technology to Boeing and the wider U.S. aircraft industry. Generally, the purpose of these programmes was to conduct R&D aimed at designing more advanced weapons or other defense systems or to reduce the cost of such systems.[2701] The more specific purpose of each of these programmes is set out below, drawn from the "Mission Description" statement contained in the programme budgets:

[2701] United States' first written submission, para. 72. Both of these aims – technological improvement, and cost reduction – are readily apparent and feature prominently in DOD's annual budgets, reviewed below, describing the nature of the research conducted under the RDT&E Program Elements at issue. Regarding the cost reduction aim, see e.g. **Defense Research Sciences**: "... leading to *cost-effective* development and safe and reliable operation of superior weapons and defensive systems"; **Materials**: "... advanced materials and processes *to reduce life cycle costs* and improve performance, *affordability*, supportability, reliability, and survivability of current and future ... . Develops materials technologies for aircraft, spacecraft, and missiles with improved *affordability*, maintainability, and enhanced performance of current and future Air Force systems. Advanced thermal protection and carbon-carbon (C-C) composites materials are developed that are *affordable* ..."; **Aerospace Flight Dynamics/Aerospace Vehicle Technologies**: "... *to reduce life cycle costs and* improve the performance of existing and future manned and unmanned aerospace vehicles, and the maintenance and survivability of air bases. The payoffs from these technology programs include: decreased vulnerability, and *increased affordability* ..."; **Aerospace Propulsion**: "... Power conditioning, thermal management, and power source improvements will significantly enhance reliability, reduce weight, and *lower life cycle costs*"; **Aerospace Avionics/Aerospace Sensors:** "... will also *reduce life cycle costs*, facilitate affordable modernization of aging and future aerospace platforms ..."; **Dual Use Science & Technology**: "... stimulate the development of dual-use technologies that will provide greater access to commercial technologies, and will result in *affordable* defense systems…"; **Advanced Materials for Weapons Systems**: "Reducing risk in materials technology improves the *affordability*, supportability, reliability, survivability, and operational performance of current and future warfighting systems"; **Flight Vehicle Technology**: "... technologies for improved performance, reliability, maintainability, and supportability while increasing *affordability* …"; **Aerospace Structures/Aerospace Technology Dev/Demo**: "... demonstrates affordable aerospace vehicle structures by utilizing innovative metallic and composite structures technologies to *reduce the cost* of airframe ownership …"; **Aerospace Propulsion and Power Technology**: "… develops and demonstrates *affordable* turbine engine high pressure core components …"; **Flight Vehicle Technology Integration**: "... provides proven aerospace vehicle technologies for allweather, day or night operations, and technologies for improved *affordability*"; **Industrial Preparedness/Manufacturing Technology**: "... ManTech provides *cost reduction processes and practices* and new manufacturing capabilities applicable to existing as well as new weapon systems under development" (emphasis added).

BCI deleted, as indicated **[***]**

- **Defense Research Sciences:** "This Basic Research program, managed by the Air Force Office of Scientific Research (AFOSR), supports Air Force research efforts comprised of in-house investigations in Air Force laboratories and extramural activities in academia and industry. The program element funds broad-based scientific and engineering basic research in technologies critical to the Air Force mission. These technologies include aerospace structures, aerodynamics, materials, propulsion, power, electronics, computer science, directed energy, conventional weapons, life sciences, and atmospheric and space sciences".[2702]

- **Materials:** "This Applied Research program is the primary source of advanced materials and processes to reduce life cycle costs and improve performance, affordability, supportability, reliability, and survivability of current and future Air Force systems. Structural, propulsion, and sub-systems materials and processes are developed for aircraft, missile, space, satellite, and launch systems applications. Electronic and optical, advanced electromagnetic, and laser protection materials and processes are developed for application in Air Force aircraft, missile, space, and personnel protection systems. Advanced nondestructive materials evaluation methods, materials design data, pollution prevention materials, materials failure analysis, and materials repair methods are developed to improve the sustainment of Air Force systems for the current and future warfighters".[2703]

- **Aerospace Flight Dynamics/Aerospace Vehicle Technologies**: "This Applied Research program determines the technical feasibility of aerospace vehicle technologies in aeromechanics, structures, flight control, air vehicle-pilot interface, vehicle subsystems, and air base technologies to reduce life cycle costs and improve the performance of existing and future manned and unmanned aerospace vehicles, and the maintenance and survivability of air bases. The payoffs from these technology programs include: decreased vulnerability, and increased affordability, reliability, maintainability, and supportability for aerospace vehicles and subsystems; improved air base operations; and safe aerospace vehicle allweather operations".[2704]

- **Aerospace Propulsion**: "This Applied Research program develops airbreathing propulsion and aerospace power technologies. The prime areas of focus are turbine engines, dual-mode ramjets, combined cycle engines, fuels, lubricants, and aerospace power technologies. … Power system technologies are focused to eliminate troublesome, centralized hydraulic systems by replacement with highly reliable electric systems. Power conditioning, thermal management, and power source improvements will significantly enhance reliability, reduce weight, and lower life cycle costs".[2705]

- **Aerospace Avionics/Aerospace Sensors**: "This Applied Research program develops the technology base for Air Force aerospace sensors. Advances in aerospace sensors are required to increase combat effectiveness by providing "anytime, anywhere" surveillance, reconnaissance, precision targeting, and electronic warfare capabilities for ground, air, and space platforms. Advances in aerospace sensor technology will also reduce life cycle costs, facilitate affordable modernization of aging and future aerospace platforms, and provide protection against emerging hostile threat systems. Meeting these needs necessitates simultaneous advances in multiple, interrelated disciplines including: airborne and spaceborne sensors (e.g. infrared, radar, etc.); multi-function high-power electronic devices; target

[2702] Defense Research Sciences Budgets for FY 1993-FY 2007 (PE# 0601102F), Exhibit EC-419.
[2703] Materials Budgets for FY 1993-FY 2007 (PE #0602102F), Exhibit EC-420.
[2704] Aerospace Flight Dynamics/Aerospace Vehicle Technologies Budgets for FY 1993-FY 2007 (PE# 0602201F), Exhibit EC-421.
[2705] Aerospace Propulsion Budgets for FY 1993-FY 2007 (PE# 0602203F), Exhibit EC-422.

detection, classification, and recognition techniques; fire control; sensor fusion methods; communication and navigation subsystems; and electronic warfare technologies".[2706]

- **Dual Use Science & Technology**: "This program allows the Air Force to leverage industry investments in advanced technologies that are mutually advantageous to both the Air Force and industry. One of the program's objectives is to establish a tool for the Air Force to stimulate the development of dual-use technologies that will provide greater access to commercial technologies, and will result in affordable defense systems that maintain battlefield superiority. A key component of the program is the costsharing requirement from both industry and the Air Force, which affirms commitment to the development effort. Specific projects are determined through annual competitive solicitation(s). A second objective is to use FY 1997 Defense Authorization Act Section 804, Other Transactions Authority, as part of the Dual Use S&T program to educate the Air Force S&T workforce in non-traditional or commercial contracting practices. Technology development areas considered include advanced materials and manufacturing, affordable sensors, advanced propulsion, power and fuel efficiency, information and communications systems, and weapons systems sustainment".[2707]

- **Advanced Materials for Weapons Systems**: "This Advanced Technology Development program demonstrates materials technology options for application into Air Force weapon systems. Developing materials technologies for the broadband laser protection of aircrews and sensors from a variety of threats is a high priority of the Air Force. The Non-Destructive Inspection/Evaluation (NDI/E) techniques for fighter, bomber, and transport aircraft are critical to the logistics centers as well as the operational fleet as the service lives of these systems increase. This program provides critical data for prospective users to make engineering decisions on both structural and non-structural materials for air and space. Reducing risk in materials technology improves the affordability, supportability, reliability, survivability, and operational performance of current and future warfighting systems".[2708]

- **Flight Vehicle Technology**: "This Advanced Technology Development program develops and demonstrates advanced aerospace vehicle subsystems, aerodynamic/flight controls, and vehicle-pilot interface technologies for improved aerospace vehicle performance, decreased vulnerability, and reduced logistics support. This program also demonstrates technologies for fixed and bare base assets, including airfield pavements, energy systems, air base survivability, air base recovery, protective systems, fire protection, and crash rescue".[2709]

- **Aerospace Structures/Aerospace Technology Dev/Demo**: "This Advanced Technology Development program develops and demonstrates affordable aerospace vehicle structures by utilizing innovative metallic and composite structures technologies to reduce the cost of airframe ownership. Innovative structural concepts integrate these two types of materials with design and monitoring techniques to develop and demonstrate solutions and repairs for corrosion fatigue, multi-site damage fatigue, and other damage to which aging aircraft are susceptible. The goal of this program is to develop technologies to restore structural integrity, extend life, and improve survivability of the current fleet, and future fleet of manned and unmanned aerospace vehicles. The results are less maintenance intensive, more durable, and more dependable structures for current and future aerospace systems. This yields lower cost of

[2706] Aerospace Avionics/Aerospace Sensors Budgets for FY 1993-FY 2007 (PE# 0602204F), Exhibit EC-423.

[2707] Dual Use Science & Technology Budgets for FY 2000-FY 2007 (PE# 0602805F), Exhibit EC-424.

[2708] Advanced Materials for Weapons Systems Budgets for FY 1993-FY 2007 (PE# 0603112F), Exhibit EC-425.

[2709] Flight Vehicle Technology Budgets for FY 1993-FY 2006 (PE# 0603205F), Exhibit EC-426.

ownership (by delaying acquisition and by reducing support and maintenance costs), restored and improved sortie rates (due to durability, damage or threat tolerance, and design for supportability), and reduced observability (both radar cross section and infrared)".[2710]

- **Aerospace Propulsion and Power Technology**: "This Advanced Technology Development program develops and demonstrates affordable turbine engine high pressure core components, advanced airbreathing engine concepts, high heat sink and thermally stable fuels, and power technology for aerospace vehicles".[2711]

- **Flight Vehicle Technology Integration**: "This Advanced Technology Development program integrates and demonstrates advanced flight vehicle technologies that will improve the performance and supportability of existing and future manned and unmanned aerospace vehicles. System level integration brings together the aerospace vehicle technologies along with avionics, propulsion, and weapon systems to flight demonstrate them in a near-realistic operational environment. Integration and flight test demonstrations reduce the risk and time required to transition technologies into operational aircraft. This program provides proven aerospace vehicle technologies for allweather, day or night operations, and technologies for improved affordability".[2712]

- **RDT&E for Aging Aircraft**: "This program is comprised of multiple efforts which will transition needed technologies from laboratory research and commercial technology development into fieldable tools or capabilities. Projects will target critical needs of the aging fleet such as corrosion, structural integrity, and improved nondestructive inspection (NDI) methods".[2713]

- **Industrial Preparedness/Manufacturing Technology**: "The Manufacturing Technology (ManTech) program is a corporate Air Force program that establishes and demonstrates advancements in manufacturing process technologies, manufacturing engineering systems, and industrial practices, and transitions these advancements into weapon systems design, development, acquisition, and/or sustainment. ManTech provides cost reduction processes and practices and new manufacturing capabilities applicable to existing as well as new weapon systems under development. ManTech strives to make superior mission enabling technologies an affordable life cycle reality by expanding access to a capable, responsible, multi-use industrial base with efficiencies comparable to world class enterprises".[2714]

- **V-22/CV-22**: "This program element funds the development of a replacement aircraft to meet the medium lift needs of the United States Marine Corps (USMC) and the special operations needs of the United States Special Operations Command (USSOCOM). … The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide critical capability to insert, extract, and resupply special operation forces into denied or sensitive territory, not currently provided by existing aircraft. This aircraft will be baselined upon the V-22 aircraft (MV-22 configuration) with added terrain following radar, fuel tanks, radios and flare/chaff dispensers, radar warning receiver and jammer, and infrared

[2710] Aerospace Structures/Aerospace Technology Dev/Demo Budgets for FY 1993-FY 2007 (PE# 0603211F), Exhibit EC-427.

[2711] Aerospace Propulsion and Power Technology Budgets for FY 1993-FY 2007 (PE# 0603216F), Exhibit EC-428.

[2712] Flight Vehicle Technology Integration Budgets for FY 1993-FY 2003 (PE# 0603245F), Exhibit EC-429.

[2713] RDT&E for Aging Aircraft Budgets for FY 2000-FY 2007 (PE# 0605011F), Exhibit EC-430.

[2714] Air Force Industrial Preparedness/Manufacturing Technology Budgets for FY 1993, FY 1996-FY 2007 (PE# 0708011F for FY 1993, FY 1997-FY 2007; PE# 0603771F for FY 1996), Exhibit EC-431.

countermeasures (CV-22 Block 0 configuration). CV-22 production buys will begin in FY04. This RDT&E funding is required to continue the design, integration, testing and certification of CV-22-required GANS/GATM components for compliance with the GANS/GATM Capstone Requirements Document (CRD)".[2715]

- **F/A-18 Squadrons**: "… The capabilities of the F/A-18 weapon system can be upgraded to accommodate and incorporate new or enhanced weapons as well as advances in technology to respond effectively to emerging future threats. Continued development capability is required to successfully optimize new F/A-18 weapon system capabilities in the Fleet. Additionally, continued improvements in reliability and maintainability are necessary to ensure maximum benefit is achieved through reduced cost of ownership and to provide enhanced availability".[2716]

- **Joint Strike Fighter**: "The Joint Strike Fighter (JSF) programme will develop and field an affordable, highly common family of next generation strike fighter aircraft for the USN, USMC, USAF and allies. Current program emphasis is on facilitating the evolution of fully validated and affordable joint operational requirements, and demonstrating cost leveraging technologies and concepts to lower risk prior to entering Engineering and Manufacturing Demonstration (E&MD) in FY 2001. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding for the program. The United Kingdom (UK) is a collaborative partner in this phase of the program and several other countries also participate".[2717]

- **C-17**: "Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Additional airlift capability is needed for rapid deployment of combat forces in support of national objectives. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theatre environments. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. … RDT&E efforts support producibility enhancements and product improvements".[2718]

7.1148 The European Communities does not dispute that, in the case of DOD, the R&D performed is of some benefit and use to DOD. The foregoing confirms this. However, of the 13 different "general aircraft" programmes at issue, it would appear that at least two had the explicit objective of developing "dual use" R&D. These are: (i) the Dual Use Applications and Dual Use Science & Technology Program (PE# 0602805F); and (ii) the Manufacturing Technology/Industrial Preparedness Program (PE# 0603771F / 0708011F / 0708011N). In its first written submission, the European Communities provides a brief overview of all of the programmes at issue, and then discusses these two particular programmes – "DUS&T" and "ManTech" – in considerable detail.[2719]

[2715] V-22 Budgets for FY 1994-FY 2007 (PE# 0604262N), Exhibit EC-433; CV-22 Budgets for FY 2002-FY 2007 (PE# 0401318F), Exhibit EC-435.

[2716] F/A-18 Squadrons Budgets for FY 1993-FY 2007 (PE# 0204136N), Exhibit EC-436.

[2717] Joint Strike Fighter Budgets for FY 1995-FY 2003 (PE# 0603800F), Exhibit EC-437.

[2718] C-17 Budgets for FY 1993-FY 2007 (PE# 0604231F for FY 1993-FY 1997; PE# 0401130F for FY 1997-FY 2007), Exhibit EC-438.

[2719] European Communities' first written submission, paras. 724-749 ("Additional Details Related to Selected RDT&E PEs").

These two programmes were funded through cooperative agreements or other cost-shared arrangements.[2720]

7.1149 We turn now to the allocation of intellectual property rights under DOD R&D contracts and agreements with Boeing. The R&D procurement contracts between DOD and Boeing differ from the R&D assistance instruments with Boeing with regard to the allocation of intellectual property rights. This appears to derive from the fact that under assistance instruments, the "recipient" is required to contribute its own funds to the R&D on a cost-shared basis. While the allocation of patents is uniform across all U.S. government R&D contracts and agreements, the allocation of "data rights" differs (depending on the extent to which there is cost-sharing.) Any data delivered under an R&D *procurement* contract funded solely by the government is "*unlimited* rights data". This means that the license acquired by the U.S. Government gives it "unlimited rights" to use the technical data "as it sees fit, both inside and outside of the government", i.e. to "use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so".[2721] A typical "Unlimited Rights" Data Clause reads:

> "With the exception of the technical data or computer software set out below, all technical data and computer software to be delivered under this contract shall be furnished with unlimited rights as defined in Section I clause of DFARS 252.227-7013.
>
> {list of selected technical data items developed at private expense follows below}"[2722]

7.1150 However, in the case of *assistance* instruments, the government acquires only "limited rights" data. In such transactions, the government generally "may release or disclose the data outside the government *only* for government purposes (government purpose rights)".[2723] The term for these "government purpose rights" is negotiable, with five years being the baseline, subject to negotiation between the parties.[2724] DOD regulations state that "{l}onger periods should be negotiated when a five-year period does not provide sufficient time to apply the data for commercial purposes ...".[2725]

[2720] See e.g. Department of Defense, Guidelines for Dual Use Science and Technology Program, Fiscal Year 2002, Exhibit EC-484, December 2000, p. 6 ("Projects must be awarded using Technology Investment Agreements or "Other Transactions" for prototypes. Intellectual property rights are often a stumbling block that prevent commercial firms from participating in defense programs. The BAA must clearly state that Agreements Officers have maximum flexibility to negotiate intellectual property rights that are appropriate for the program. Agencies are encouraged to negotiate for the minimum intellectual property rights for the Government that are necessary for program execution, which could result in the award of an Other Transaction agreement". See also, European Communities' first written submission, paras. 725 and 733 ("TRP awarded funds, on a cost-shared basis, to industry-led projects working to create new dual-use technologies", and "As with TRP, DOD established DUS&T for the purposes of jointly funding, with industry, the development of dual-use technologies ...").

See e.g. Manufacturing Technology Program, 10 U.S.C. § 2521 (2003), Exhibit EC-445, p. 6 ("For any grant awarded or contract, cooperative agreement, or other transaction entered into on a basis other than a cost-sharing basis because of a determination made under subparagraph (A), the transaction file for the project concerned must document the rationale for the determination.")

[2721] United States' first written submission, para. 350; United States' second written submission, para. 64 and accompanying footnote.

[2722] Air Force Contract F33615-91-C-5716 with Boeing regarding Design and Manufacturing of Low Cost Composite Fuselage, 24 July 1991, Exhibit EC-507, p. 24.

[2723] 48 C.F.R. §§ 227.7100 - 227.7103-17, § 227.7103-4(a)(1), Exhibit EC-590 (emphasis added). The Government may, however, "use, modify, release, reproduce, perform, display or disclose" such jointly-funded data "within the government without restriction". Ibid. at § 227.7103-4(a)(1).

[2724] 48 C.F.R. § 227.7103-5(b)(2), Exhibit EC-590.

[2725] 48 C.F.R. § 227.7103-5(b)(2), Exhibit EC-590.

During the term of the "government purpose rights", the government "may not use, or authorize other persons to use, technical data marked with government purpose rights legends for commercial purposes".[2726]

7.1151 Another relevant consideration is whether the transactions at issue involve the typical elements of a purchase of services. In this regard, we observe that the R&D procurement contracts between DOD and Boeing differ from the R&D assistance instruments with Boeing with regard to the payment of a fee or profit. The DOD R&D assistance instruments with Boeing do not provide for any fee or profit. All of the procurement contracts submitted to the Panel appear to provide for the payment of a fee. §22.205 of the *DOD Grant and Agreement Regulations*[2727] ("Distinguishing assistance from procurement") explains that the payment of a "fee or profit":

> "is consistent with an activity whose principal purpose is the acquisition of goods and services for the direct benefit or use of the United States Government, rather than an activity whose principal purpose is assistance." (§ 22.205(b))

7.1152 §22.205 of the *DOD Grant and Agreement Regulations* therefore mandates that a procurement contract, rather than an assistance instrument, be used in all cases where: (i) a fee or profit is to be paid to the recipient of the instrument; or (ii) the instrument is to be used to carry out a programme where a fee or profit is necessary to achieving programme objectives (§22.205(b)). Along the same lines, Part 34 ("Administrative Requirements for Grants and Agreements with For-Profit Organizations") states in § 34.18: "In accordance with 32 CFR 22.205(b), grants and cooperative agreements shall not: (a) Provide for the payment of fee or profit to the recipient. (b) Be used to carry out programs where fee or profit is necessary to achieving program objectives". The payment of a fee or profit is also prohibited under technology investment agreements.[2728]

7.1153 Based on the foregoing, it appears to the Panel that DOD "assistance instruments" are not properly characterized as "purchases of services", but that there does not appear to be any reason for treating DOD "procurement contracts" as something other than a "purchase of services". The Panel would further note that the distinction between DOD "procurement contracts" and DOD "assistance instruments" is not one of the Panel's own making. In its first written submission, the United States draws the Panel's attention to the fact that there are two different categories of transactions between DOD and Boeing. Specifically, the United States draws the Panel's attention to the fact that "{u}nder U.S. government contracting law, some of these instruments are formally termed 'contracts', and others 'other transactions', 'cooperative agreements', or 'technology investment agreements'".[2729] The United States notes that some of the "contracts" submitted by the European Communities are "procurement contracts", and some are "cooperative agreements, technology investment agreements, or other transactions".[2730] The United States acknowledges that R&D contracts are used only when the "principal purpose" is the acquisition of supplies or services for the "direct benefit or use" of the federal government, and that an "agreement" will "often have a clause specifying that its principal purpose is not the acquisition of goods or services for direct use by the U.S. government".[2731] The Panel has put a number of questions to the parties on this distinction, and asked the parties to explain

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[2726] 48 C.F.R. § 227.7103-5(b)(4), Exhibit EC-590.

[2727] 32 CFR § 22.205, Exhibit US-22.

[2728] § 37.230 provides that, in accordance with 32 CFR 22.205(b), a TIA may not be used if any participant is to receive fee or profit. As noted below, 32 CFR 22.205(b) provides that the payment of a fee/profit "is consistent with an activity *whose principal purpose is the acquisition of goods and services for the direct benefit or use of the United States Government,* rather than an activity *whose principal purpose is assistance*". (§ 22.205(b))

[2729] United States' first written submission, footnote 75.

[2730] United States' first written submission, para. 91.

[2731] United States' first written submission, footnote 70.

the differences between the two categories of transactions.[2732] In response to these questions, the European Communities generally argues that what matters "is the substance of the transaction, not its form"[2733], and that the Panel should not be guided by the "label" of the transactions.[2734] The United States counters that "the EC fails to recognize that the type of vehicle (that is, cooperative agreement, procurement contract, or Other Transaction) used will determine some of the substantive features of the contract".[2735] Along the same lines, in response to the European Communities' argument that consideration of the types of instrument is "too formalistic" to guide the analysis, the United States indicates that it is "difficult to square this position with the EC view that the terms of the contracts are relevant, since under the U.S. system, the type of instrument will determine which contract clauses are available".[2736]

7.1154 Notwithstanding the foregoing, the United States argues that all of the DOD R&D contracts and agreements at issue are properly characterized as "purchases of services", and the European Communities argues that none of the DOD R&D contracts and agreements at issue are properly characterized as "purchases of services". We will consider some of the arguments advanced by the parties, in support of their respective positions, below.

7.1155 The United States argues that the DOD assistance instruments at issue are properly characterized as genuine "purchases of services" because:

> "these instruments typically committed Boeing to a coordinated research and development program in accordance with a detailed statement of work. These agreements set a schedule for performance of research, and tied payments to completion of the requisite tasks. The agreements specified that costs would be governed by the same rules applicable to contracts, and that Boeing would provide a final report, as well as quarterly reports and reports upon the achievement of certain milestones."[2737]

7.1156 In the Panel's view, it is reasonable to assume that similar or identical legal terms and characteristics are found in most if not all instruments through which governments around the world provide R&D grants. For example, it seems unlikely that a government would provide an R&D grant to a firm in the absence of an agreed statement of work / R&D.[2738] The fact that the "terms and conditions of a cooperative agreement are enforceable, including by actions in U.S. courts, in the same way as contracts"[2739] is also hardly surprising. In this regard, we note that Department of

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[2732] See questions 19, 20, 151, 152, 154, 191, 192, 195, 197, and 321.
[2733] See e.g. European Communities' response to question 20(b).
[2734] European Communities' response to question 154, para. 217.
[2735] United States' comments on European Communities' response to question 20, para. 76.
[2736] United States' comments on European Communities' response to question 19, para. 75.
[2737] United States' first written submission, para. 92.
[2738] For example, we note that both parties agree that the "Department of Labour 787 Worker Training Grants", which we will examine further below in this Report, constitute "grants" within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. These "grants" contained a "Statement of Work". See e.g. Edmonds Community College Grant Notification, Exhibit EC-622, p. 1 ("The Grantee is approved for this project up to $1,475,045 as specified in the attached Statement of Work with an additional increment of $725,045"). See also, European Communities' second written submission, para. 348 ("It is normal practice among governments all over the world to provide R&D support on the basis of contracts – this does not make such contracts conventional transactions whereby R&D services are purchased by NASA. For instance, the European Commission provides funds to consortia of EC companies under its R&D Framework Programme to cover a portion of costs (and only a portion) incurred in projects selected through calls for tender. This support is regulated by a contract under which both parties have obligations – the companies to carry out the work, and the European Commission to provide the funds.")
[2739] United States' response to question 20, para. 51.

Commerce (DOC) cooperative agreements – which the United States acknowledges are "grants" – have similar if not identical features. Among other things:

- As with DOD cooperative agreements, under DOC cooperative agreements (as with all U.S. government R&D contracts, agreements, and grants) the U.S. Government acquires a royalty-free license to use any patents developed as a result of the R&D;[2740]

- As with DOD cooperative agreements, DOC cooperative agreements are legally binding instruments;

- As with DOD cooperative agreements, DOC requires that recipients conduct the work set out in an agreed upon work statement and does not allow the recipient to unilaterally modify the scope of work;[2741]

- As with DOD cooperative agreements, DOC "closely monitors the ongoing progress of the project and ensures that it maintains appropriate technical and financial oversight of the project"[2742]; and

- As with DOD cooperative agreements, DOC cooperative agreements require that the recipients provide technical and other reports.[2743]

7.1157 None of these features make DOC cooperative agreements "purchases of services". If that is so, then it necessarily follows that these same features do not make DOD R&D cooperative agreements and other assistance instruments with Boeing "purchases of services".

7.1158 The Panel is not persuaded by the United States' general arguments that technologies developed under the DOD R&D programmes are neither "technologically applicable" to commercial aircraft (because of the different missions and cost-sensitivities of military and commercial aircraft), nor "legally applicable" to commercial aircraft (because of Boeing's decision to ensure that the 787 is "ITAR free").

7.1159 With respect to the first of these arguments, we believe that the United States has failed to substantiate its assertion that only a miniscule amount of the R&D conducted by Boeing under the DOD R&D programmes at issue was "technologically applicable" to commercial aircraft. Among other things, the United States' argument that DOD-funded research on military aircraft is designed to fulfil military functions, and does not translate well to the different commercial imperatives of

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[2740] European Communities' first written submission, para. 784 ("The US Government itself retains some rights with respect to the intellectual property developed with ATP funding. As with NASA and DOD patent waivers/transfers, the US Government reserves a nonexclusive, nontransferable license to use the invention on its own behalf. It also retains march-in rights").

[2741] United States' first written submission, para. 377 ("The PMT, which includes both a technical expert and a business expert, is responsible for monitoring the progress of the project and *ensuring its consistency with the project proposal*") (emphasis added). See also, United States' first written submission, para. 378 ("In certain circumstances it may become necessary to modify a project's technical plan in light of such developments. In such cases, the PMT ensures that modified plans remain consistent with the approved goals and objectives of the project proposal and equivalent to the original merit of the project with respect to the ATP selection criteria").

[2742] United States' first written submission, para. 376. See also, United States' first written submission, para. 378 ("PMT continuously reevaluates the progress of a project to determine how technological or industrial developments affect the project and to ensure that the project remains on course for a successful conclusion").

[2743] United States' first written submission, para. 378 ("In addition, the ATP General Terms and Conditions require all award recipients to submit quarterly technical and business performance reports. The PMT reviews all such reports and tracks project developments on an ongoing basis").

commercial aircraft production (in terms of FAA certification/maintenance requirements and efficiency of production) overlooks the fact that at least some of the DOD programmes, for example, the ManTech Composites Affordability Initiative related to Advanced Fibre Placement, had the *explicit objective* of funding R&D to be applied towards both military and civil aircraft and emphasized the development of lower cost technologies. In this regard, we also recall the United States' explanation that there exists a link between "assistance instruments" and "dual use" technologies: according to the United States, the reason that Boeing and other firms agree to enter into cost-sharing cooperative agreements with DOD is because of the benefit (or potential benefit) of the R&D *for their commercial operations*. For example, the United States explains that, "{t}here are some small areas of overlap, which produce "dual-use" technologies, but in these areas, DOD generally tries to use the *potential civil application* to motivate commercial companies to contribute their resources to lessen DOD's cost of reaching its military objective".[2744] The United States explains elsewhere that "where a DoD contracting agency sees *additional direct applications* for purchased technology, it seeks to obtain private sector contribution for the development of the technology".[2745] The United States further explains that, "the incentive for private participation is the opportunity to share the cost of developing some technology of mutual interest to both the contractor and the government".[2746]

7.1160 With respect to the second of these arguments, we consider that the United States has failed to substantiate its assertion that the *International Traffic in Arms Regulations* ("ITAR") make it effectively impossible for Boeing to utilize any of the R&D performed under DOD R&D contracts and agreements towards LCA. Among other things, while we accept the United States' assertions that the ITAR restrict Boeing's ability to use certain R&D performed for DOD towards its civil aircraft, and while we accept that Boeing complies with ITAR in general and took steps to ensure that the 787 will be "ITAR free", and while we further accept that the situation with respect to the scope and coverage of the ITAR is not entirely clear, the United States has failed to explain how its assertions regarding the ITAR can be reconciled with the fact that some of the R&D funded by DOD – including R&D performed by Boeing under assistance instruments entered into under the ManTech and DUS&T Programs, which were subject to the ITAR - had the *explicit objective* of being applied towards civil aircraft.

7.1161 The European Communities has advanced a number of arguments as to why, in its view, the DOD R&D contracts at issue cannot be characterized as genuine "purchases of services".

7.1162 The European Communities argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because the DOD R&D contracts in fact "relate to DOD's purchase of goods" – i.e. the military aircraft and other defence systems that DOD ultimately procures.[2747] The Panel is not persuaded by this argument. While we accept that the military aircraft that Boeing produces for DOD are goods within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement, and while the R&D contracts clearly "relate" to these goods, we do not see how it follows that these contracts are themselves properly characterized as "purchases of goods". Most R&D is either directly or indirectly related in some way to the development of new products. However, "Research and Development Services", including R&D services on natural sciences, are also one of the sectors with regard to which WTO Members may undertake commitments under the General Agreement on Trade in Services, indicating that they are "services" for purposes of the GATS. "Research and development" is similarly categorized in the United Nations Provisional Central Product Classification. R&D is also widely classified as a "service" under national procurement regimes. For example, the U.S. government procurement regime classifies "Research

[2744] United States response to question 208, para. 266 (emphasis added).
[2745] United States' first written submission, para. 132 (emphasis added).
[2746] United States' first written submission, footnote 119 and para. 112.
[2747] European Communities' second written submission, para. 454.

and development" as a service under Federal Service Classification Code A, which is then further divided into subcodes based on the area of research. The European Communities similarly treats R&D as a "service" under Division 73 of its "Common Procurement Vocabulary".[2748]

7.1163 The European Communities argues that there is a degree of artificiality in how DOD finances R&D:

> "DOD does not simply pay one purchase price for its goods; rather DOD first pays for R&D through its RDT&E budgets, and then pays for acquisition costs through its procurement budgets. In theory, one could construct a total purchase price for the goods that DOD acquires by summing up the amounts DOD pays through its RDT&E and procurement budgets."[2749]

7.1164 We consider that the European Communities could have framed its case in terms of the "total purchase price" paid to Boeing for the aircraft it acquired, and it was open to the European Communities to provide evidence that this "total purchase price" was higher than the "total purchase price" that a commercial purchaser (e.g. airlines) would pay for a similar product (e.g. LCA). In this way, the European Communities could have focused on the "broader" transaction, rather than focusing narrowly on DOD's R&D contracts with Boeing. And had the European Communities advanced that kind of analysis, then the Panel might have found the existence of a financial contribution in the form of a "purchase of goods" within the meaning of Article 1.1(a)(1)(iii). However, the European Communities did not advance this analysis. Among other things, there is no evidence before the Panel on the "total purchase price" that DOD pays Boeing. Instead, the European Communities has focused more narrowly on the payments and access to facilities that DOD provided to Boeing under R&D contracts and agreements.

7.1165 The European Communities also argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because DOD conveys monetary resources to Boeing "for the purpose of conducting dual-use R&D".[2750] In our view, if it were the case that DOD R&D contracts between DOD and Boeing had as their purpose conducting "dual use" R&D, then this might well serve as a basis for finding that those procurement contracts are not properly characterized as "purchases of services". However, as noted above, it appears that only two of the 23 R&D programmes at issue in this dispute – the DUS&T and ManTech Programs – had a declared purpose of funding "dual use" R&D (and, as was also indicated above, it appears that both of these programmes were, as consequence, funded primarily if not exclusively through cooperative agreements or other cost-shared "assistance instruments").

7.1166 The European Communities further argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because "DOD RDT&E contracts do not contain the typical elements of a purchase". In this regard, the European Communities argues among other things that under the cooperative agreements entered into between Boeing, "Boeing does not make a profit pursuant to these agreements, while the seller in a typical "purchase" transaction would undoubtedly expect to make a profit".[2751] As discussed above, the "atypical" elements that the European Communities emphasizes are not found in procurement contracts. Rather, they are elements found in cooperative agreements and other assistance instruments. Thus, this argument does nothing to undermine, and would seem to reinforce, the conclusion that the DOD procurement contracts at

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[2748] See United States' first written submission, para. 95; European Communities' response to question 116, para. 51.

[2749] European Communities' second written submission, paras. 475-476.

[2750] European Communities' second written submission, para. 453.

[2751] European Communities' response to question 15(c), and European Communities' comments on United States' response to question 20(a), para. 75.

issue are "purchases of services" and that the DOD assistance instruments are not purchases of services.

7.1167 The European Communities argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because "Boeing does not offer such R&D services to anybody else but NASA and DOD". We accept the European Communities' factual assertion that Boeing does not provide similar R&D services to commercial entities on the market, and we do not believe that the United States has adequately rebutted this factual assertion.[2752] However, we do not see how this is relevant to whether the DOD R&D contracts with Boeing are properly characterized as "purchases of services". It seems clear that there are certain "services" that governments "purchase", and that no entities other than governments purchase. This does not call into question that these are "purchases of services".

7.1168 The European Communities argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because the "DOD RDT&E contracts do not exclusively affect trade in services", but rather "affect trade in goods".[2753] In our view, the problem with this argument is that it imports into the Article 1.1(a)(1) analysis considerations that are germane to a later step in the analysis, in this instance, the analysis of the "effects" of the subsidy under Articles 5 and 6 of the SCM Agreement. The extent to which the measures challenged in this dispute affect trade in goods – i.e. "the effect of the subsidy" – is the question that arises in the context of the analysis of serious prejudice under Articles 5 and 6. To find that DOD R&D procurement contracts with Boeing provide a "financial contribution" by reference to their *effect* on trade in goods, the Panel would essentially have to make a finding on the "effect of the subsidy" (i.e. the extent to which DOD and other federal measures affect trade in goods is the issue in dispute under Articles 5 and 6) and then, on the basis of that finding, reason that there is a financial contribution.

7.1169 The European Communities argues that what matters "is the substance of the transaction, not its form"[2754], and that "the manner in which the municipal law of a WTO Member classifies a transaction cannot, in itself, be determinative for the purpose of applying any provision of the WTO covered agreements".[2755] It is difficult to disagree with either proposition. And it is because we agree with both propositions that we have gone beyond the simple "labels" of the transactions, and examined, in detail, the different substantive features of these contracts and agreements, as reflected, *inter alia*, in U.S. laws and regulations and in the contracts and agreements themselves. The conclusion reached is that there are significant, substantive differences between DOD's R&D procurement contracts and DOD's R&D assistance instruments with Boeing. This is not an analysis that rests on the label "contract". There is more to our analysis than the label or form of the transactions.

[2752] The United States asserts that Boeing does offer certain "services" to customers other than the government, "including financing services and lifecycle solution and support services". In support of that assertion, the United States cites a Boeing Company annual report and a section of the Boeing website that describes certain "lifecycle solutions and support" services that Boeing offers to its "aviation and transport industry customers". United States' comments on European Communities' response to question 15, paras. 63 and 65. The United States does not, however, contest the European Communities' assertions that Boeing does not offer "LCA-related R&D services" to anybody else but NASA and DOD, and/or that Boeing has not advertised itself as a service provider for "LCA-related R&D" in the market.

[2753] European Communities' response to question 15(c), para. 66.

[2754] See e.g. European Communities' response to question 20(b).

[2755] Appellate Body Report, *US – Softwood Lumber IV*, paras. 56 and 65; Appellate Body Report, *US – Corrosion-Resistant Steel Sunset Review*, footnote 87 to para. 87. See also, Panel Report, *India – Additional import Duties*, footnote 320 ("we would agree that the purpose stated in a Member's legislation is not determinative, by itself, for WTO purposes. Nevertheless, it is a relevant factual element which we may consider together with others in coming to an overall conclusion ...") and para. 7.32.

7.1170 Finally, the European Communities argues that the DOD R&D contracts at issue are not properly characterized as "purchases of services" because "DOD RDT&E contracts have helped Boeing develop technology that it utilizes toward its LCA".[2756] As an initial matter, we believe that this argument is inextricably linked to, and is in fact about, the allocation of intellectual property rights under the R&D contracts and agreements at issue. That is, the reason that Boeing may be able to utilize the technology developed under DOD R&D contracts towards its LCA is that under these R&D contracts and agreements, Boeing retains certain intellectual property rights. If DOD acquired complete intellectual property rights over the results of the R&D, then Boeing would not be able to utilize the results for any purpose. Thus, this argument is equivalent to arguing that the DOD R&D contracts at issue cannot be characterized as purchases of services by virtue of the allocation of intellectual property rights under the contracts.

7.1171 For the reasons given above, the Panel considers that the question of whether or not a transaction is properly characterized as a "purchase of services" depends on whether or not the work performed was principally for the benefit or use of the government (or unrelated third parties), or rather principally for the benefit or use of the "service" "seller" itself. The evidence relating to DOD aeronautics R&D, reviewed above, leads to the conclusion that the work that Boeing performed under its aeronautics R&D contracts with DOD was principally for the benefit and use of DOD, and is therefore properly characterized as a "purchase of services". Therefore, the Panel finds that the payments and access to facilities provided to Boeing under DOD contracts are not financial contributions within the meaning of Article 1.1(a)(1). However, the evidence demonstrates that the work Boeing performed under its aeronautics R&D "assistance instruments" with DOD was principally for the benefit and use of Boeing itself. Accordingly, the Panel concludes that DOD's R&D agreements (i.e. "assistance instruments") with Boeing are not properly characterized as "purchases of services". Therefore, the Panel finds that the payments made to Boeing under these agreements are covered by Article 1.1(a)(1)(i) of the SCM Agreement as a direct transfer of funds.[2757] The Panel further finds that the access to DOD facilities provided to Boeing under these agreements constitutes a provision of goods or services within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.

(ii) Whether there is a benefit within the meaning of Article 1.1(b) of the SCM Agreement

Arguments of the European Communities

7.1172 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that the DOD "subsidies" confer "benefits" upon Boeing's LCA division. More specifically, the European Communities argues that: (i) the financial contributions "relate to the production of all Boeing LCA"; (ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required to pay anything in return" for the funding and support, and "has not been required to repay the US Government for any resulting commercial rewards"; (iv) Boeing has received valuable "knowledge and experience" from the aeronautics R&D, and (v) it is "axiomatic that such R&D funding and support, which provide commercial rewards for nothing in return, are not available on the market".[2758]

7.1173 In its second written submission, the European Communities responds to the United States' argument that DOD's RDT&E contracts with Boeing do not confer a benefit within the meaning of Article 1.1(b). The European Communities argues, among other things, that "the critical point is that

[2756] European Communities' second written submission, para. 457.
[2757] As with NASA, we do not accept that these DOD payments to Boeing constitute outright "grants".
[2758] European Communities' first written submission, paras. 764-766.

Boeing maintains the results of and technology from the R&D for use throughout its military and civil divisions, without adequately paying DOD back for their commercial value".[2759]

7.1174 The European Communities then contrasts the manner in which DOD directly finances R&D from the manner in which commercial buyers of civil aircraft (e.g. airlines) indirectly finance R&D. The European Communities argues that in the commercial market, the cost of R&D that is directly applied toward developing or building a particular product is generally linked to the cost of that product. In other words, R&D directly used toward the development of a military aircraft would be recovered through the price of the military aircraft, and R&D directly used toward the development of a commercial aircraft would be recovered through the price of the commercial aircraft. The European Communities argues that DOD practice, however, departs from this commercial benchmark: DOD does not simply pay one purchase price for its goods; rather DOD first pays for R&D through its RDT&E budgets, and then pays for acquisition costs through its procurement budgets. In theory, one could construct a total purchase price for the goods that DOD acquires by summing up the amounts DOD pays through its RDT&E and procurement budgets.[2760]

7.1175 The European Communities then argues that "{t}he overwhelming evidence already reviewed above and discussed in the EC First Written Submission shows that Boeing does in fact use R&D results funded through DOD's RDT&E programme toward the development of its LCA. However, DOD fails to recoup the RDT&E funding and support that relates to Boeing LCA, and therefore confers a benefit on Boeing's LCA division".[2761]

7.1176 In addition, the European Communities argues that "a commercial entity that pays for R&D retains the full rights to the technologies that result", and that if "the entity performing the R&D wishes to utilize the R&D in this fashion, it is required to negotiate some form of license rights from the entity paying for the R&D, thereby ensuring that the paying entity recoups the value of the R&D being used by the performing entity for some other purpose".[2762] The European Communities refers[2763] to an article on intellectual property rights and stem cell research[2764] and a Declaration of Regina Dieu, Legal Counsel in the Airbus SAS Industrial procurement Legal Department, which states that when Airbus funds an R&D project it exclusively and solely owns any and all Intellectual Property generated or acquired in connection with and during the performance of the R&D project.[2765] The European Communities also points to DOD's recoupment policy prior to June 1992, as evidence of a benchmark pursuant to which, in the words of DOD's own recoupment regulations, the Department of Defense intended 'to recover a fair share of its investment in nonrecurring costs related to products, and/or a fair price for its contribution to the development of related technology, when the products are sold, and/or when technology is transferred.'[2766]

Arguments of the United States

7.1177 In its first written submission, the United States argues that even if the Panel were to find that the payments made to Boeing under the R&D contracts constitute a financial contribution covered by

[2759] European Communities' second written submission, para. 474.
[2760] European Communities' second written submission, paras. 475-476.
[2761] European Communities' second written submission, para. 477.
[2762] European Communities' second written submission, para. 483.
[2763] European Communities' second written submission, para. 376.
[2764] Sean M. O'Connor, "Intellectual Property Rights and Stem Cell Research: Who Owns the Medical Breakthroughs?" 39 New Eng. L. Rev. 665 (2005), Exhibit EC-1212, p. 669.
[2765] Declaration of Regina Dieu, 8 November 2007, Exhibit EC-1178.
[2766] European Communities' second written submission, para. 479.

Article 1.1(a)(1), the European Communities has not met its burden of proof with regard to the existence of a benefit within the meaning of Article 1.1(b).[2767]

7.1178 First, the United States responds to the European Communities' argument that Boeing "pays" nothing to DOD in return for RDT&E funding.[2768] The United States argues that whether under a R&D contract or agreement, when Boeing conducts research for the government, it "pays" DOD value commensurate with the funds expended. It puts Boeing's scientists at DOD's disposal, to conduct research designed by DOD. It reports periodically on results and makes presentations, educating DOD personnel on the outcome of the work. DOD's patent and data rights mean that if another contractor on a subsequent government project (whether with DOD or any other government agency) needs to make use of the technology or data, it may do so without making any payment or receiving any permission from Boeing. Accordingly, it is plainly untrue to assert that Boeing pays nothing in return for government funding.[2769]

7.1179 The United States proceeds to argue that DOD ensures that it pays no more than "adequate remuneration" for its purchases in the RDT&E contracts at issue in this dispute by reimbursing the contractor – Boeing – only enough to cover the costs that Boeing actually incurred in conducting the research activities subject to the contract, along with a reasonable profit margin.[2770] In the context of its discussion of the amount of the profit paid under DOD contracts, the United States notes that "agreements do not allow for payment of a fee", and that under cooperative agreements, other transactions, and technology investment agreements, "the incentive for private participation is the opportunity to share the cost of developing some technology of mutual interest to both the contractor and the government".[2771]

7.1180 The United States concludes by addressing the relevance of the possible "spillover" effects from DOD R&D to Boeing's LCA division. The United States recalls that the European Communities ends its argument on benefit with an "axiom", namely, that DOD's purchases of R&D, "which provide commercial rewards for nothing in return, are not available on the market". This "axiom", too, is untrue. In its civil aviation division, Boeing also conducts research aimed at developing new products. It recovers the cost of that research through revenue gained from selling aircraft to customers, who are in every real sense funding the research. Technology developed in this effort does sometimes have military application. However, these customers do not insist that Boeing reimburse them when it uses civil technology on military products. Rather, they recognize that this sort of "spillover" of knowledge is a natural outcome of a commercial business relationship. Thus, even if a DOD RDT&E contract resulted in a true dual-use technology, and that technology was not barred from use on large civil aircraft by U.S. export laws, that rare example of such military-to-civil synergy would be completely commercial in nature.

7.1181 In its second written submission, the United States reiterates that even if the Panel were to find that the payments made to Boeing under the R&D contracts constitute a financial contribution covered by Article 1.1(a)(1), they did not confer a benefit because "any payment to Boeing was no more than adequate remuneration for what Boeing did, which, under the analysis provided in Article 14(d), establishes that the payments do not confer a benefit".[2772] It then responds to several

[2767] United States' first written submission, para. 100.
[2768] United States' first written submission, paras. 101-103.
[2769] United States' first written submission, para. 103.
[2770] United States' first written submission, paras. 104-105, and 108-115.
[2771] United States' first written submission, footnote 119 and para. 112.
[2772] United States' second written submission, para. 37. At paragraph 107 of its first written submission, the United States observes with respect to Article 14(d) that "this standard for measuring a benefit covers only the government purchase of a good, or provision of a good or service, thereby emphasizing that purchase of a service, such as R&D, is not a financial contribution for which determination of a benefit is necessary. However, if DoD's RDT&E contracts were assumed *arguendo* to constitute financial contributions,

arguments advanced by the European Communities in its Oral Statement at the first meeting with the Panel. With respect to the DOD's former "recoupment" policy, the United States repeats its earlier argument that the European Communities misunderstands what was covered by this policy and that "the old policy did not have the effect that the EC asserts". The United States then adds that the more important point is that during the period covered by the European Communites' allegations, DOD used cost-contribution agreements (cooperative agreements, technology investment agreements, and other transactions) to require contractors to make an up-front contribution to any research with applicability beyond DOD's direct requirements. Therefore, there was no need to try to "recoup" money from subsequent commercial transactions. Rather, "{w}hen DoD perceives a project as having usefulness to both DoD and Boeing, it requires the company to share the costs of that project".[2773]

Evaluation by the Panel

Payments and access to facilities provided to Boeing through DOD assistance instruments

7.1182 It is well established that a financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement if the terms of the financial contribution are more favourable than the terms available to the recipient in the market.[2774] Thus, in order to determine whether the financial contributions to Boeing provided under DOD assistance instruments confer a benefit upon Boeing within the meaning of Article 1.1(b), the Panel must begin by recalling what the *terms* of those financial contributions are. Only then can the Panel proceed to compare *those* terms with the terms of a market transaction.

7.1183 As the Panel has already concluded above in its analysis of the existence of a financial contribution, DOD has made payments to Boeing and granted Boeing access to DOD facilities *on the condition that Boeing perform aeronautics R&D work that is principally for Boeing's own benefit and use*, rather than principally for the benefit or use of the U.S. Government (or unrelated third parties). While the R&D agreements of course contain numerous other terms (for example, the contracts and agreements contain or incorporate by reference numerous standardized clauses governing miscellaneous matters), this is, in the Panel's view, the core "term" upon which the financial contributions are provided – i.e. that Boeing use the payments and access to facilities it receives from DOD for the purpose of conducting aeronautics R&D work that is principally for Boeing's own benefit and use. The Panel has concluded above that a transaction in which the work performed is principally for the benefit and use of the "seller" cannot properly be characterized as a "purchase of services".

7.1184 In this case, both parties agree that, with regard to the financial contributions that Boeing receives under the DOD R&D programmes, "the relevant market benchmark would be the terms of a commercial transaction in which one entity pays another entity to conduct R&D".[2775] The question, then, is whether, in a "commercial transaction", one entity would pay another entity to conduct R&D on these same terms, i.e. on the term that the entity receiving the financial contributions conduct R&D that is principally for the benefit and use of the entity receiving the payment. The Panel believes that no commercial entity, i.e. no private entity acting pursuant to commercial considerations, would provide payments (and access to its facilities and personnel) to another commercial entity on the

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the standard set out in Article 14(d) would provide useful context for confirming there was no benefit in light of the fact that Boeing received no more than adequate remuneration for its work".

[2773] United States' second written submission, paras. 42-43.

[2774] See paras. 7.30-7.31 of this Report.

[2775] European Communities' response to question 21, para. 76; United States' response to question 136, para. 85.

condition that the other entity perform R&D activities principally for the benefit and use of that other entity. At a minimum, it is to be expected that some form of royalties or repayment would be required in the event that financial contributions were provided on such terms. Thus, with respect to the financial contributions provided by DOD to Boeing, which were provided on these terms, we consider that it was not necessary for the European Communities to present benchmark evidence of the terms and conditions of specific market-based R&D financing in order to establish, at least on a prima facie basis, that these DOD transactions conferred a benefit upon Boeing. Rather, it would fall upon the United States, if it wished to rebut this prima facie case, to identify examples of transactions in which commercial entities have paid other commercial entities to perform R&D on these same terms, i.e. to perform R&D that is principally for the benefit or use of the entity receiving the funding. The United States has not provided any evidence or examples of commercial transactions in which one entity pays another entity to conduct R&D that is principally for the benefit and use of the entity receiving the funding.

7.1185 Accordingly, the Panel finds that the financial contributions provided to Boeing under its aeronautics R&D assistance instruments with DOD confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

Payments and access to facilities provided to Boeing through R&D procurement contracts

7.1186 Having found that these transactions do not provide a financial contribution to Boeing that is covered by Article 1.1(a)(1) of the SCM Agreement, it is not necessary for the Panel to address the issue of whether or not these alleged financial contributions confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.

7.1187 For these reasons, the Panel concludes that the payments and access to facilities granted to Boeing under assistance instruments are provided on terms that confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement. In the light of its conclusion that the payments and access to facilities granted to Boeing under R&D procurement contracts are properly characterized as "purchases of services" that fall outside of the scope of Article 1.1(a)(1) of the SCM Agreement, the Panel makes no finding on whether the different set of terms upon which those alleged financial contributions are provided confer a benefit.

7.1188 For these reasons, we find that some of the payments and access to facilities that DOD provided to Boeing through the 23 aeronautics R&D programmes at issue constitute subsidies within the meaning of Article 1 of the SCM Agreement.

(d) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

(i) Arguments of the European Communities

7.1189 In its first written submission, the European Communities argues that the "DOD RDT&E Program" is *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement, or, in the alternative, de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.[2776] The European Communities argues that the programmes are *de jure* specific by virtue of the subject matter of the research. More specifically, the European Communities argues that the "RDT&E Program funds only those enterprises in the research-based defence and aerospace industries that are capable of conducting specified activities: (1) basic research; (2) applied research; (3) advanced technology development; (4) advanced component development and prototypes; (5) system development and

[2776] European Communities' first written submission, paras. 767-770.

demonstration; (6) RDT&E management support; and (7) operational system development".[2777] According to the European Communities, these "activities may be performed only by a limited number of enterprises", and the "DOD RDT&E Program" is "explicitly limited to the companies in the US defence industry capable of conducting these specialized activities".[2778] The European Communities argues that the programmes are de facto specific because Boeing has received a "disproportionate" amount of the funding provided under DOD RDT&E programmes. In this regard, the European Communities asserts that from 1991 through 2005, Boeing has received on average 12.6 per cent of all DOD RDT&E awards, and as much as 17.7 per cent of all such funding in 2001. In fact, only four other companies – Lockheed Martin, Northrop Grumman, Raytheon, and United Technologies – received more than $1.0 billion in RDT&E funding in FY 2005. On average, Boeing and these four other companies have together received 45.2 per cent of all DOD RDT&E awards from 1991 through 2005. The European Communities notes that all RDT&E funding went to "research-based defence and aerospace companies".[2779]

7.1190 In its second written submission, the European Communities responds to the United States' argument that the "DOD RDT&E Program" is not specific within the meaning of Article 2 of the SCM Agreement. The European Communities clarifies that "what is at issue in this dispute are *the 13 general aircraft RDT&E PEs* and *10 military aircraft RDT&E PEs* that gave rise to dual-use technologies, and an examination *at the PE level* confirms that *each PE* was explicitly limited to a group of enterprises, and therefore each PE is *de jure* specific within the meaning of Article 2.1(a)". In this regard, the European Communities explains that "only enterprises capable of conducting RDT&E in narrow areas such as defense research sciences, materials, aerospace flight dynamics, etc., and only enterprises capable of supporting or building military aircraft such as the V-22/CV-22, F/A-18, JSF, C-17, etc., could receive RDT&E funding and support from DOD under the PEs at issue. As such, each PE is *de jure* specific pursuant to Article 2.1(a) of the *SCM Agreement*".[2780]

(ii) Arguments of the United States

7.1191 In its first written submission, the United States argues that the "DOD RDT&E program" covers "a huge number of areas, and involves a huge number of companies, universities, and other research entities"[2781], and that the DOD "RDT&E program" is therefore neither *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement nor de facto specific within the meaning of Article 2.1(c) of the SCM Agreement.[2782]

7.1192 In its second written submission, the United States reiterates that the DOD RDT&E programme is not specific because "DoD contracts for RDT&E on a large variety of topics, with thousands of enterprises, in a large number of industries".[2783]

(iii) Evaluation by the Panel

7.1193 The European Communities advances three different lines of argument in support of its contention that the subsidies provided to Boeing are specific. First, the European Communities argues that the entire DOD "RDT&E Program" is *de jure* specific within the meaning of Article 2.1(a) of the SCM Agreement by virtue of the fact that DOD provides RDT&E funding only to those entities

[2777] European Communities' second written submission, para. 767.
[2778] European Communities' first written submission, paras. 768-769.
[2779] European Communities' first written submission, para. 770.
[2780] European Communities' second written submission, para. 490 (emphasis added).
[2781] United States' first written submission, para. 118.
[2782] United States' first written submission, paras. 118-123.
[2783] United States' second written submission, para. 44.

capable of carrying out the types of activities enumerated in DOD's regulations. Second, the European Communities argues that the entire DOD "RDT&E Program" is de facto specific within the meaning of Article 2.1(c) of the SCM Agreement because the top five U.S. aerospace companies – Boeing, Lockheed Martin, Northrop Grumman, Raytheon, and United Technologies – have received, on average, 45.2 per cent of total DOD RDT&E funding over the period 1991 through 2005. Third, the European Communities argues that each of the individual RDT&E programmes at issue in this dispute is *de jure* specific within the meaning of Article 2.1(a).

7.1194 We recall, at the outset, that we have not found that all of the funding provided to Boeing under the so-called DOD "RDT&E Program" is a subsidy within the meaning of Article 1 of the SCM Agreement, or even that all of the funding provided to Boeing under the 23 RDT&E programmes at issue is a subsidy. Rather, the Panel has concluded, on the basis of the evidence and arguments before it, that some of the funding (and access to government facilities) provided to Boeing under the programmes at issue is a subsidy, whereas other funding (and access to government facilities) provided to Boeing under these programmes is not a subsidy. Accordingly, while we will conduct our analysis of specificity under Article 2 of the SCM Agreement as the parties have, i.e. by examining whether R&D funding provided to entities under the aforementioned programmes is limited to "certain enterprises" within the meaning of Article 2 of the SCM Agreement, in following this line of analysis we do not mean to suggest that either the "RDT&E Program" as a whole, or the individual RDT&E programmes at issue as a whole, is a subsidy within the meaning of Article 1.

7.1195 The first issue that arises from the arguments of the parties is whether, for the purposes of analysing DOD R&D subsidies to Boeing under Article 2 of the SCM Agreement, the focus should be on the "RDT&E Program" as a whole, or rather on the 23 individual RDT&E programmes at issue (which may be termed "programme elements", "project elements", or "PEs") into which the broader "RDT&E Program" is subdivided. The Panel considers that it is appropriate to analyse specificity at the level of the individual programmes, rather than at the level of the entire "RDT&E Program". First, the descriptions of the "PEs" themselves refer to the R&D activities covered by each PE as an individual "program", and these programmes each have a defined purpose.[2784] Second, the European Communities has pointed to an official DOD document which explains that "the program element … is the major aggregation, at which RDT&E efforts are organized, budgeted and reviewed".[2785] Third, what the parties refer to as the "RDT&E Program" appears to be the aggregate of all R&D activities in all areas, by all of the individual branches of the U.S. armed forces (Army, Navy, and Air Force) and the Department of Defense.[2786] It is not clear that this aggregation constitutes a "programme" for the

[2784] See above, para. 7.1147 of this Report.

[2785] DoD Financial Management Regulation, Volume 2B, Chapter 5, June 2006, Exhibit EC-1324, p. 5-3. The United States responds that this statement "comes from a two-page segment of the DoD Financial Management Regulations, which address the policy, regulations, and procedures that are the responsibility of the Comptroller of DoD. This document deals with the organization and review of the *DoD budget*, not of the research efforts themselves". United States' response to question 140, para. 117. Like the European Communities, the Panel "fails to see how this explanation does anything to refute the understanding that DOD organises its own R&D efforts based on PEs". European Communities' comments on United States' response to question 140, para. 125.

[2786] The Department of Defense's (DOD) budget is divided into five broad budget categories: Military Personnel; Operations & Maintenance; "Procurement"; "Research, Development, Test, & Evaluation (RDT&E)"; and Military Construction. The "RDT&E" budget category funds research, development, test and evaluation spending by DOD toward designing and developing military systems or technology, while the "Procurement" budgets fund the actual acquisition costs of parts and labour of military systems that are in production. RDT&E funding focused on a particular military aircraft may continue even after procurement spending commences on the same military aircraft. This funds the further design or development of advanced technologies that can later be incorporated into a military system that is already in production. The DOD RDT&E programme is executed by the individual branches of the U.S. armed forces (Army, Navy and Air Force), as well as by DOD generally. The broader RDT&E programme is subdivided into numerous "program

purposes of Article 2 of the SCM Agreement. In this regard, we disagree with the United States that "a determination as to the specificity of DoD RDT&E cannot be made at the PE level, as the EC contends, because the PEs challenged by the European Communities are, for the most part, not themselves programs, or even groupings below the program level, and do not create a frame of reference".[2787] In our view, it is the so-called "RDT&E Program" that creates no "frame of reference" for the specificity analysis under Article 2 of the SCM Agreement.

7.1196 Given that we consider that the individual programmes appear to be the relevant frame of reference for the purpose of Article 2 of the SCM Agreement, the question that we ask is not whether the "RDT&E Program" as a whole is specific under Article 2 of the SCM Agreement; rather, the relevant question is whether the individual programmes at issue are specific under Article 2. Given the fairly narrow focus of R&D performed under the 23 individual programmes (i.e. PEs) challenged by the European Communities, we conclude that the subsidies provided to Boeing through DOD R&D assistance instruments entered into under the 23 programmes at issue are specific within the meaning of Article 2.1(a) of the SCM Agreement.

7.1197 In any event, even if it were necessary to examine specificity at the level of the "RDT&E Program" as a whole, we believe that the European Communities has demonstrated de facto specificity under Article 2.1(c) of the SCM Agreement. The European Communities has substantiated its assertion that Boeing, Lockheed Martin, Northrop Grumman, Raytheon, and United Technologies have received on average 45.2 per cent of total DOD RDT&E funding over the period 1991 through 2005.[2788] The United States' has responded that this does not establish the existence of "disproportionately" large amounts being granted to "certain enterprises or industries". In our view, it is not necessary for us to resolve the issue of whether this demonstrates "disproportionately" large amounts for the purpose of Article 2.1(c), or what the proper "baseline" is for determining whether these five contractors have received "disproportionately" large amounts of R&D funding. The reason is that, leaving aside this particular factor in Article 2.1(c), this evidence demonstrates that almost half of all RDT&E funding went to five enterprises, all of which form part of the same industry. In our view, this is more than enough to confirm that RDT&E funding goes "predominantly" to firms in the defense industry, and this is enough to establish de facto specificity under Article 2.1(c).

7.1198 We conclude that the payments and access to facilities provided to Boeing through the 23 programmes at issue are subsidies that are sufficiently limited to "a group of enterprises or industries" within the meaning of Article 2.

(e) The amount of the subsidy to Boeing's LCA division

(i) Arguments of the European Communities

7.1199 The European Communities estimates that DOD provided Boeing with $4.3 billion in funding and support for "dual use" R&D over the period 1991-2006. The European Communities argues that $2.4 billion of that total should be treated as a subsidy to Boeing's LCA division.[2789]

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elements" or "PEs". We will simply refer to these as "programmes" here. The programmes into which the broader RDT&E programme is subdivided include what the European Communities terms "general aircraft" R&D programmes (which are not specific to a particular military aircraft, such as the "Defense Research Sciences" programme), as well as "military aircraft" programmes (specific to a particular military aircraft, e.g. the "C-17" programme). Each of these programmes has its own "PE#"; for example, the "Defense Research Sciences" programme is identified as "PE# 0601102F".

[2787] United States' response to question 50, para. 146.

[2788] See European Communities' first written submission, para. 770; European Communities' second written submission, para. 491. Top Contractors' Share of DOD RDT&E, FY 1991-FY 2005, Exhibit EC-29.

[2789] NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division, Exhibit EC-25, p. 20.

BCI deleted, as indicated **[***]**

(ii) Arguments of the United States

7.1200 The United States argues that the European Communities has overestimated the amount of "dual use" research conducted under the programmes at issue. According to the United States, the total amount of any subsidy to Boeing's LCA division under DOD R&D contracts and agreements is significantly less than $308 million over the period 1991-2006.

(iii) Evaluation by the Panel

7.1201 The European Communities has demonstrated that some of the DOD payments and access to facilities, equipment and employees provided to Boeing through aeronautics R&D contracts and agreements are subsidies within the meaning of Article 1 of the SCM Agreement. The Panel will now consider the amount of the subsidy to Boeing's LCA division.

7.1202 It is not in dispute that DOD provided Boeing with $45 billion in RDT&E funding over the period 1991-2005.[2790] The European Communities does not assert that the entirety of this funding constitutes a subsidy to Boeing. Rather, the European Communities' claim relates to DOD R&D funding and support to Boeing for "dual use" R&D.

7.1203 At the outset, we note that there is no publicly available information setting forth the amount of DOD "dual use" R&D funding to Boeing. Thus, the European Communities has presented the Panel with an estimate of the amount of the DOD subsidy provided to Boeing's LCA division. The European Communities estimates that out of the $45 billion in RDT&E funding that Boeing received from DOD over the period 1991-2005, approximately $4.3 billion related to "dual use" R&D. The European Communities' estimate is based on a detailed expert report prepared by CRA International.[2791] The European Communities argues that $2.4 billion of this "dual use" R&D funding and support should be treated as a subsidy to Boeing's LCA division. The European Communities argues that the Panel should adopt its estimate of the amount of DOD R&D subsidies to Boeing 's LCA division, unless the United States discloses evidence indicating the actual value of the payments and access to facilities, equipment and employees that DOD provided to Boeing for the purpose of conducting "dual use" R&D. The United States submits that it has done so. In the Panel's view, if the United States were able to provide the Panel with the actual information and figures regarding the amount of DOD R&D subsidies to Boeing, or information from which the maximum amount of those subsidies could be derived, then such information would necessarily prevail over the European Communities' estimate. Therefore, the Panel will begin by reviewing the evidence provided by the United States.

7.1204 The United States initially indicated that the total funding provided to Boeing under the 23 programmes at issue that met the European Communities' criteria of "dual use" R&D was not more than $529 million.[2792] The United States provided the Panel with a list of 43 R&D contracts and agreements in the form of Exhibit US-41. However, the United States subsequently indicated that Exhibit US-41 contained several mistakes, and that the actual maximum amount is only $308 million.[2793] Furthermore, the United States has argued that this represents the maximum possible amount of DOD subsidies to Boeing, and that many of the R&D contracts and agreements

[2790] See European Communities' second written submission, para. 471; Top Contractors' Share of DOD RDT&E, FY 1991-FY 2005, Exhibit EC-29, p. 1.

[2791] CRA International, U.S. Department of Defense (DoD) Research, Development, Test and Evaluation (RDT&E) Funding Support to The Boeing Company for Dual-Use Aircraft R&D, November 2006, Exhibit EC-7.

[2792] United States' first written submission, paras 160-161.

[2793] See United States' response to question regarding U.S. Exhibits (10 January 2008), p. 2.

that comprise this $308 million estimate do not, in fact, involve any "dual use" R&D.[2794] In addition, in respect of a number of the few remaining contracts and agreements on its list, the United States argues that some had "elements" with "no civil applicability".[2795] Finally, the United States' estimate of the amount of any DOD subsidy (i.e. significantly less than $308 million) concerns the total amount of the subsidy to Boeing as a whole: if we were to apply the European Communities' methodology for allocating DOD subsidies to Boeing's "LCA division", then whatever remained of the United States' estimate following all of these reductions would then need to be further split in half. Thus, while the United States has never provided an exact figure regarding the actual amount of any DOD subsidy to Boeing's LCA division, it is clear that any such estimate would be significantly less than $308 million, and, it seems, significantly less than $100 million over the period 1991-2006.

7.1205 The Panel cannot accept the United States' estimate that the total amount of any DOD subsidy to Boeing for "dual use" R&D is significantly less than $308 million over the period 1991-2006. First, we note that the United States' estimate completely excludes all funding provided to Boeing under the "military aircraft" RDT&E programmes at issue, which accounts for $3.1 billion out of the European Communities' $4.3 billion estimate. Second, the United States' assertions regarding the maximum value of DOD R&D contracts and agreements with Boeing related to "dual use" R&D is not supported by the same kind of evidence as the United States' estimate of the amount of NASA payments to Boeing: among other things, while the United States has provided the Panel with evidence demonstrating that the maximum amount of the NASA payments to Boeing for aeronautics R&D cannot be more than $1.05 billion, the United States has advanced no similar argument or evidence in respect of the maximum amount of DOD R&D. In addition, the United States' estimate of the amount of DOD R&D subsidies to Boeing does not account for the value of any access to DOD facilities granted to Boeing. In addition, the Panel does not consider it credible that less than 1 per cent of the $45 billion in aeronautics R&D funding that DOD provided to Boeing over the period 1991-2005 had any potential relevance to LCA.[2796]

7.1206 However, while the Panel cannot accept the United States' estimate of the total amount of DOD R&D subsidies to Boeing, we are also unable to accept the European Communities' estimate of the amount of the subsidy to Boeing's LCA division. The reason is that the European Communities' estimate is based on a methodology and analysis that do not distinguish payments and access to facilities provided to Boeing under procurement contracts from payments and access to facilities provided to Boeing through assistance instruments.

7.1207 The parties have informed the Panel that it is not possible to perform such an analysis on the basis of the information before us.[2797] Based on the Panel's careful review of the parties' responses to

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[2794] See United States' first written submission, paras. 161-162; United States' response to question 208, para. 290; United States' comments on European Communities' response to question 190(b), para. 326.

[2795] United States' response to question 208(b), para. 290 and footnote 376.

[2796] We recognize that the concept of "dual use" R&D can be interpreted relatively broadly or narrowly. For example, under a relatively broad understanding, research with "theoretical" or "potential" civil applications might be considered "dual use". Under a narrower conception of what constitutes "dual use", it might be considered that only R&D giving rise to tangible technologies actually applied on civil aircraft should be considered "dual use". We are not taking a position on this definitional issue here. We understand the United States' estimate of the amount of DOD R&D that is "dual use" to reflect the broadest understanding of "dual use" R&D; applying a narrower definition of what constitutes "dual use", the United States' estimate would be even less.

[2797] See e.g. parties' responses to question 321 (the United States explains why "it is not possible to conclude that a given program element funds exclusively assistance agreements or exclusively procurement contracts" (para. 23); the European Communities likewise indicates that "PEs cannot necessarily be divided into a group of PEs funded through cooperative agreements or other "assistance" instruments, and a group of PEs funded through procurement contracts; rather, any of these instruments may be utilised under any RDT&E PE" (para. 29)).

question 321, and of the evidence submitted by the parties relating to the measures at issue, we agree with the parties that it is not possible to perform such an analysis on the basis of the information before us.

7.1208 In *US – Upland Cotton*, the Appellate Body clarified that while a panel should endeavour to arrive at an estimate of the order of the "magnitude" of the subsid(ies) alleged to cause price suppression within the meaning of Article 6.3(c) of the SCM Agreement, a "precise, definitive quantification is not required".[2798] Although the Appellate Body was focusing in that case on Article 6.3(c), we believe that the same conclusion must also hold true with respect to the other forms of serious prejudice set forth in Article 6.3.[2799]

7.1209 In this case, where we have determined that a measure constitutes a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement, we have attempted to determine the amount of the subsidy that is properly allocated to Boeing's "LCA division". However, in the case of DOD R&D subsidies to Boeing, while we do not accept the United States' estimate that the total amount of any DOD subsidy to Boeing for "dual use" R&D is significantly less than $308 million over the period 1991-2006, we also cannot accept the European Communities' estimate, and any attempt by the Panel to go further and arrive at our own estimate of the amount of the subsidy to Boeing's LCA division would be speculative.[2800]

[2798] Appellate Body Report, *US – Upland Cotton*, para. 467 ("In sum, reading Article 6.3(c) in the context of Article 6.8 and Annex V suggests that a panel should have regard to the magnitude of the challenged subsidy and its relationship to prices of the product in the relevant market when analyzing whether the effect of a subsidy is significant price suppression. In many cases, it may be difficult to decide this question in the absence of such an assessment. Nevertheless, this does not mean that Article 6.3(c) imposes an obligation on panels to quantify precisely the amount of a subsidy benefiting the product at issue in every case. A precise, definitive quantification of the subsidy is not required").

[2799] We see nothing in the Appellate Body's analysis to suggest that a different conclusion would apply to any other forms of serious prejudice set out in Article 6.3 of the SCM Agreement. Among other things, the Appellate Body referred generally to the differences between Parts III and V of the SCM Agreement in reaching this conclusion. See e.g. Appellate Body Report, *US – Upland Cotton*, para. 464.

[2800] However, we see no evidence to suggest that the value of the payments and access to government facilities that DOD provided to Boeing through assistance instruments would have been greater than the value of the payments and access to government facilities that DOD provided to Boeing through procurement contracts. In this regard, we observe that the European Communities submitted a number of DOD R&D contracts and agreements with Boeing along with its first written submission. Of these, nine were procurement contracts. See Exhibit EC-507, Exhibit EC-508, Exhibit EC-509, Exhibit EC-510, Exhibit EC-511, Exhibit EC-514, Exhibit EC-827, Exhibit EC-838 and Exhibit EC-1143. The remaining seven were cooperative agreements, technology investment agreements or other assistance instruments. See Exhibit EC-406, Exhibit EC-512, Exhibit EC-513, Exhibit EC-515, Exhibit EC-517, Exhibit EC-518 and Exhibit EC-830. We have reviewed all of these R&D contracts and agreements to ascertain the face value indicating the total amount of government funds "committed" or "obligated" under each. It appears that $72 million was committed under these nine procurement contracts , and that $48 million was committed under these seven assistance instruments. Thus, funding committed under assistance instruments ($48 million) accounts for 40 per cent of the total amount of funding committed under the contracts and agreements submitted by the European Communities. Exhibit US-41 (revised) lists 42 different DOD assistance instruments and procurement contracts with Boeing, totalling $308 million. This list includes 14 assistance instruments, and 28 procurement contracts. The list indicates that the "amount" provided through assistance instruments is approximately $44 million. Thus, funding provided through assistance instruments accounts for 14 per cent of the total amount indicated in Exhibit US-41(revised).

Therefore, if the Panel were to accept the various steps in the European Communities' analysis leading to its estimate that DOD provided a $2.4 billion subsidy to Boeing's LCA division, and if the Panel were to consider that there is no evidence to support the conclusion that the value of the payments and access to government facilities that DOD provided to Boeing through "assistance instruments" would have been greater than the value of the payments and access to government facilities that DOD provided to Boeing through

(f) Conclusion

7.1210 **For these reasons, the Panel finds that some of the payments and access to facilities that DOD provided to Boeing through the 23 aeronautics R&D programmes at issue constitute specific subsidies within the meaning of Articles 1 and 2. While the Panel does not accept the United States' estimate that the total amount of any DOD subsidy to Boeing for "dual use" R&D is significantly less than $308 million over the period 1991-2006, the amount of the subsidy to Boeing's LCA division is unclear.**

7. Department of Commerce (DOC) aeronautics R&D

(a) Introduction

7.1211 The European Communities argues that DOC makes payments to Boeing (and grants Boeing access to facilities, equipment and employees) to perform R&D under the Advanced Technology Program (ATP). The European Communities argues that these payments (and access to facilities, equipment and employees) are subsidies within the meaning of Article 1 of the SCM Agreement, and are specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that DOC provided $7.5 million in R&D funding to Boeing over the period 1991-2004, and submits that $4.6 million of that total should be treated as a subsidy to Boeing's LCA division.[2801]

7.1212 The United States accepts that DOC R&D funding to Boeing is a subsidy within the meaning of Article 1 of the SCM Agreement. However, the United States argues that the subsidy is not specific within the meaning of Article 2 of the SCM Agreement. In addition, the United States asserts that Boeing only received **[***]** million under the eight projects at issue.[2802]

(b) The measures at issue

7.1213 The pertinent item of the European Communities' panel request[2803] reads:

> "The US Department of Commerce ("DOC") transfers economic resources to the US LCA industry on terms more favourable than available on the market or not at arm's length, through the Advanced Technology Program operated pursuant to the Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, as amended, and the American Technology Preeminence Act of 1991, Pub. L. No. 102-245 and 15 CFR §§ 295.1 *et seq.*, by allowing the US LCA industry to participate in this programme, making payments to the US LCA industry under this programme, or allowing the US LCA industry to exploit the results of this programme, including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research. In particular, economic resources are transferred to the US LCA industry through a number of projects, including, but not limited to, the following:
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> - Project 93-01-0089 (CVD Diamond-Coated Rotating Tools for Machining Advanced Composite Materials);
> - Project 95-12-0024 (An Agent-Based Framework for Integrated Intelligent Planning – Execution);

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procurement contracts, then the Panel might estimate that the amount of the subsidy to Boeing's LCA division would not be more than half of what the European Communities estimates, i.e. not more than $1.2 billion.

[2801] NASA/DOD/DOC Aeronautics R&D Subsidies to Boeing LCA Division, Exhibit EC-25, p. 21.

[2802] United States' first written submission, para. 395.

[2803] WT/DS353/2, item 4, pp. 11-12.

- Project 95-01-0108 (Precision Optoelectronics Assembly);
- Project 91-01-0267 (Pre-competitive Advanced Manufacturing of Electrical Products);
- Project 97-05-0020 (Extended Enterprise Coalition for Integrated Collaborative Manufacturing Systems);
- Project 98-01-0168 (Hot Metal Gas Forming);
- Project 90-01-0126 (Solid-State Laser Technology for Point Source X-Ray Lithography);
- Project 95-02-0036 (Plasma-Based Processing of Lightweight Materials for Motor-Vehicle Components and Manufacturing Applications)."

7.1214 Thus, the European Communities has not challenged the ATP as a whole. Rather, it has challenged only the eight ATP "projects" through which DOC has provided funding to Boeing/MD for LCA-related research.[2804] This is clear, and is not in dispute.

7.1215 What also seems clear is that the European Communities' argument that DOC provides goods and services to Boeing in the form of government "facilities, equipment and employees" relates to an alleged measure that is not identified in the European Communities' panel request, and therefore falls outside of the scope of the European Communities' claim. In contrast to the items of the European Communities' panel request relating to NASA subsidies (which cover "facilities", "equipment" and "employees") and DOD subsidies (which covers only "facilities"), the European Communities' panel request makes no reference to DOC providing access to facilities, equipment or employees.[2805]

7.1216 The United States does not dispute that Boeing received funding and/or participated in the consortia of companies that received funding, under each of the eight projects at issue. It is also not in dispute that different segments of Boeing / MD participated in and received funding related to these projects, including Boeing's LCA division, Boeing's IDS segment, and McDonnell Douglas's "electronic systems" division.[2806]

7.1217 The ATP is administered by the National Institute of Standards & Technology, which is a division of the DOC.

7.1218 The legislation pursuant to which the ATP operates appears to be comprised of three different legal instruments. These are: (i) the so-called "ATP statute"[2807]; (ii) the American Technology Preeminence Act of 1991[2808] ("ATPA") which amended the ATP statute; and (iii) the "ATP

[2804] European Communities' second written submission, para. 512.

[2805] For a side-by-side comparison of these items of the European Communities' Panel Request, see above, para. 7.1120.

[2806] ATP Project Briefs, Projects 90-01-0126 (Solid-State Laser Technology for Point-Source X-Ray Lithography), 91-01-0267 (PREAMP – Pre-competitive Advanced Manufacturing of Electrical Products), 93-01-0089 (CVD Diamond-Coated Rotating Tools for Machining Advanced Composite Materials), 95-01-0108 (Precision Optoelectronics Assembly), 95-02-0036 (Plasma-Based Processing of Lightweight Materials for Motor-Vehicle Components and Manufacturing Applications), 95-12-0024 (An Agent-Based Framework for Integrated Intelligent Planning – Execution), 97-05-0020 (EECOMS: Extended Enterprise Coalition for Integrated Collaborative Manufacturing Systems), and 98-01-0168 (Hot Metal Gas Forming), Exhibit EC-553.

[2807] Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, § 5131, Exhibit EC-531 ("OTCA"); OTCA § 5131 is codified at 15 U.S.C. § 278n, as amended, Exhibit EC-532 ("ATP Statute").

[2808] American Technology Preeminence Act of 1991, Pub. L. No. 102-245("ATPA"), Exhibit EC-533.

Rules".[2809] In addition to the legislation, certain documents set forth certain guidelines and eligibility criteria for participation in the ATP.[2810]

7.1219 The ATP statute indicates that the Advanced Technology Program has the purpose:

> "… of assisting United States businesses in creating and applying the generic technology and research results necessary to--
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> (1) commercialize significant new scientific discoveries and technologies rapidly; and
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> (2) refine manufacturing technologies.
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> The Secretary, acting through the Director, shall assure that the Program focuses on improving the competitive position of the United States and its businesses, gives preference to discoveries and to technologies that have great economic potential, and avoids providing undue advantage to specific companies. …"[2811]

7.1220 According to the ATPA, this assistance is designed

> "to improve the competitive position of United States industry by supporting industry-led research and development projects in areas of emerging technology which have substantial potential to advance the economic well-being and national security of the United States."[2812]

7.1221 The ATP Rules provide that:

> "The purpose of the Advanced Technology Program (ATP) is to assist United States businesses to carry out research and development on high risk, high pay-off, emerging and enabling technologies."[2813]

7.1222 Boeing participated in the eight ATP-funded projects identified in the panel request, and each of these projects is briefly described in a document prepared by the DOC entitled "ATP Project Briefs".[2814] According to the European Communities, these ATP projects fall into three general

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[2809] National Institute of Standards & Technology Advanced Technology Program Rules, 15 C.F.R. §§ 295.1 *et seq.* ("ATP Rules"), Exhibit EC-534.

[2810] ATP Eligibility Criteria for U.S. Subsidiaries of Foreign-Owned Companies: Legislation, Implementation and Results, NISTIR-6099A, March 2004 ("2004 ATP Eligibility Criteria"), Exhibit EC-535; Guidelines For Proposing Economic Evaluation Studies to The Advanced Technology Program (ATP), NISTIR-5896, November 1996 ("Guidelines for ATP Economic Evaluation Studies"), Exhibit EC-536; Advanced Technology Program: Proposal Preparation Kit, February 2004 ("2004 ATP Proposal Preparation Kit"), Exhibit EC-539; Advanced Technology Program: Proposal Preparation Kit, November 1998, Exhibit EC-540 ("1998 ATP Proposal Preparation Kit"); Advanced Technology Program: Proposal Preparation Kit, December 1997 ("1997 ATP Proposal Preparation Kit"), Exhibit EC-543.

[2811] ATP Statute, Exhibit EC-532, § 278n(a).

[2812] ATPA, Exhibit EC-533, § 201(b)(2)(C) (concerning Congress's findings and purposes).

[2813] ATP Rules, Exhibit EC-534, § 295.1(a).

[2814] ATP Project Briefs, Projects 90-01-0126 (Solid-State Laser Technology for Point-Source X-Ray Lithography), 91-01-0267 (PREAMP – Pre-competitive Advanced Manufacturing of Electrical Products), 93-01-0089 (CVD Diamond-Coated Rotating Tools for Machining Advanced Composite Materials), 95-01-0108 (Precision Optoelectronics Assembly), 95-02-0036 (Plasma-Based Processing of Lightweight Materials for Motor-Vehicle Components and Manufacturing Applications), 95-12-0024 (An Agent-Based Framework for Integrated Intelligent Planning – Execution), 97-05-0020 (EECOMS: Extended Enterprise Coalition for Integrated Collaborative Manufacturing Systems), and 98-01-0168 (Hot Metal Gas Forming), Exhibit EC-553.

categories, all of which are applicable to LCA: (i) improving the manufacturing of lightweight composite and metal structures and materials, (ii) improving electronics components, and (iii) improving manufacturing efficiency and supply chain logistics. Various segments of Boeing and MD have participated in and received funding related to these projects, including Boeing's commercial aircraft division, Boeing's space and defence division, and McDonnell Douglas's electronic systems division.[2815]

7.1223 In each of these projects, Boeing participated as a member of a consortium.[2816] It appears that DOC provided all of the funding under the ATP, including all of the funding at issue, through cooperative agreements.[2817]

(c) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

(i) Arguments of the European Communities

7.1224 In its first written submission, the European Communities argues that DOC directly transfers funds in the form of "grants" to Boeing's LCA division to support research and development, and that this "direct R&D funding" constitutes a financial contribution within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. The European Communities asserts that DOC also provides ATP recipients "with organizational and technical advice, and makes available federal equipment, facilities, and personnel", and that the provision of these "goods and services" by the U.S. Government constitutes an additional financial contribution within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement.[2818]

7.1225 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that the DOC "subsidies" confer "benefits" upon Boeing's LCA division. The European Communities argues that: (i) the financial contributions "relate to the production of all Boeing LCA"; (ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required to pay anything in return" for the funding and support, and "has not been required to repay the US Government for any resulting commercial rewards"; (iv) Boeing has received valuable "knowledge and experience" from the aeronautics R&D, and (v) it is "axiomatic that such R&D funding and support, which provide commercial rewards for nothing in return, are not available on the market".[2819]

(ii) Arguments of the United States

7.1226 In its first written submission, the United States does not dispute that the payments made to Boeing under the eight projects at issue constitute a financial contribution in the form of a direct transfer of funds.[2820] In response to a question from the Panel, the United States accepts the

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[2815] European Communities' first written submission, para. 792, citing *ATP Project Briefs*, Exhibit EC-553.

[2816] United States' first written submission, para. 379; European Communities' second written submission, para. 516.

[2817] European Communities' first written submission, para. 798: United States' first written submission, para. 360 ("ATP is a cost-sharing program. It uses cooperative agreements as funding instruments to assist in financing projects in which private companies, universities, government laboratories, independent research institutions, and/or non-profit organizations participate.")

[2818] European Communities' first written submission, para. 798.

[2819] European Communities' first written submission, paras. 800-802.

[2820] United States' first written submission, para. 395 ("ATP provides a financial contribution to program participants by directly transferring funds.")

European Communities' characterization of these measures as "grants".[2821] The United States does not respond to the European Communities' argument regarding DOC "facilities, equipment and employees" in either its first or second written submissions.

7.1227 In its first written submission, the United States does not respond to the European Communities' arguments relating to the existence of a benefit to Boeing's LCA division. However, in a response to a question from the Panel, the United States confirms that DOC R&D funding "can be considered a subsidy within the meaning of Article 1 of the SCM Agreement".[2822]

(iii) Evaluation by the Panel

7.1228 The ATP payments at issue were made to "joint ventures" or "consortia" in which Boeing participated.[2823] It is clear from the evidence before the Panel that the ATP funding at issue was provided for R&D that was principally for the joint venture / consortia's own benefit or use. This evidence includes, among other things, the fact that the payments were made pursuant to "assistance instruments" (cooperative agreements), the fact that the declared objective of the ATP is "to improve the competitive position of United States industry"[2824] and "to assist United States businesses"[2825], and the fact that DOC has no independent use for the R&D that was performed.[2826] The United States does not dispute that the payments made to Boeing under the eight "projects" at issue constitute a financial contribution in the form of a direct transfer of funds.[2827] More specifically, the United States accepts the European Communities' characterization of these measures as "grants".[2828] Accordingly, the Panel finds that the payments involve a direct transfer of funds within the meaning of Article 1.1(a)(1)(i).

7.1229 With respect to the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, we recall the reasoning that led us to find that NASA's R&D contracts and agreements, and certain DOD R&D agreements, confer a benefit within the meaning of Article 1.1(b). In short, the Panel believes that no commercial entity, i.e. no private entity acting pursuant to commercial considerations, would provide payments (and access to its facilities and personnel) to another commercial entity on the condition that the other entity perform R&D activities principally for the benefit and use of that other entity. At a minimum, it is to be expected that some form of royalties or repayment would be required in the event that financial contributions were provided on

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[2821] United States' response to question 194, para. 240 ("the United States explicitly recognizes that under some circumstances – represented in this dispute by ATP cooperative agreements – cost sharing arrangements can and do confer a benefit to the private party recipient when the government's "share" represents a "grant" for purposes of Article 1.1(a)(1)(i).")

[2822] United States' response to question 14, para. 30.

[2823] European Communities' second written submission, para. 516.

[2824] ATPA, Exhibit EC-533, § 201(b)(2)(C) (concerning Congress's findings and purposes).

[2825] ATP Rules, Exhibit EC-534, § 295.1(a).

[2826] United States' response to question 214, paras. 342-344 ("ATP uses cooperative agreements not to purchase any goods or services, but to fund ATP projects without any expectation that the research will improve the operations of ATP, the National Institute of Standards and Technology ("NIST"), or the U.S. Department of Commerce ... Although the program monitors ATP projects, neither the administering agency, NIST, nor the U.S. Government receive any operational improvements, goods, or services in return for the funding that is provided").

[2827] United States' first written submission, para. 395 ("ATP provides a financial contribution to program participants by directly transferring funds").

[2828] United States' response to question 194, para. 240 ("the United States explicitly recognizes that under some circumstances – represented in this dispute by ATP cooperative agreements – cost sharing arrangements can and do confer a benefit to the private party recipient when the government's 'share' represents a 'grant' for purposes of Article 1.1(a)(1)(i)"). See also, United States' response to question 14, para. 30.

such terms.[2829] The United States does not dispute that the "grants" provided to the "joint ventures" or "consortia" in which Boeing participated confer a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[2830] Accordingly, the Panel finds that the payments are provided on terms that confer a benefit within the meaning of Article 1.1(b).

7.1230 For these reasons, the Panel finds that the ATP payments at issue are subsidies within the meaning of Article 1 of the SCM Agreement.

(d) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

(i) Arguments of the European Communities

7.1231 In its first written submission, the European Communities argues that ATP subsidies are specific within the meaning of Article 2.1(a) of the SCM Agreement. The European Communities argues that "Access to ATP funding is explicitly limited by regulation to only those US companies that perform research into 'high risk, high pay-off, emerging and enabling technologies'". The ATP is therefore specific "to those US enterprises, industries, or group of industries that perform this type of research, including the US LCA industry". The European Communities also argues that the ATP statute specifies that the Program's emphasis is "on solving generic problems of specific industries, and on making those industries more competitive in world markets", and that these "specific industries" include the fields of "high-resolution information systems, advanced manufacturing, and advanced materials". Finally, the European Communities argues that the eight particular ATP projects at issue are limited to funding companies involved in: (i) manufacturing composite and metal structures and materials; (ii) designing, developing, and manufacturing electronics components; and (iii) improving logistics for manufacturing and supply chains. Thus, these ATP subsidies are specific because DOC explicitly limits access to this funding to certain enterprises.[2831]

7.1232 In its second written submission, the European Communities responds to the United States' argument that the ATP is not specific within the meaning of Article 2 of the SCM Agreement by reiterating two of the arguments set forth above: (i) that the ATP as a whole is specific within the meaning of Article 2.1(a) because of the fact that ATP funding is explicitly limited by regulation to "the group of US enterprises or industries that perform research into 'high risk, high pay-off, emerging

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[2829] Recipients of ATP funding are not required to pay royalties. At paragraphs 786-787 of its first written submission, the European Communities explains that:

> "the US Government at one time required ATP participants to give the government a share of the royalties and licensing fees they received on ATP-funded technology, implicitly recognizing that ATP participants were receiving a commercial benefit at public expense. More specifically, the OTCA and initial ATP regulations required ATP participants to share royalties and licensing fees resulting from intellectual property derived from ATP funding with the US Government, "in an amount proportional to the Federal share of the costs incurred by the business or joint venture." This requirement was repealed as of 1992 by the ATPA.
>
> In 2002, DOC proposed various reforms to ATP, one of which was to reinstate a royalty sharing requirement. In particular, DOC suggested that ATP award recipients "pay an annual royalty to the Federal government of 5 percent of any gross revenues derived from a product or invention supported by or created as a result of ATP funding." In making this proposal, DOC noted that "… it is fair and reasonable to require direct repayment based on the initial Federal share if the company is profitable and nets considerable gains from technology developed under ATP." This proposal has not been adopted." (footnotes omitted)

[2830] United States' response to question 14, para. 30.
[2831] European Communities' first written submission, para. 803.

and enabling technologies'"[2832]; and that (ii) "what is at issue in this dispute are the eight ATP projects in which Boeing participated, and an examination at the *project level* confirms that each of these projects was explicitly limited to a group of enterprises, and therefore each of these projects is *de jure* specific within the meaning of Article 2.1(a)".[2833] In its second written submission, the European Communities explains that it advances these two arguments as arguments in the alternative.[2834]

(ii) Arguments of the United States

7.1233 In its first written submission, the United States argues that the ATP is not specific within the meaning of Article 2 of the SCM Agreement because it provides funding for innovative, high risk technologies "across a wide range of industries and technology sectors"[2835], as reflected in the distribution of projects and funding across a range of sectors, the technologies funded, and the broad eligibility criteria.[2836]

7.1234 In its second written submission, the United States reiterates that the ATP's focus on research into "high risk, high pay-off, emerging and enabling technologies" does not amount to a limitation to a "group of enterprises or industries" within the meaning of the SCM Agreement, because if it did, the SCM Agreement's specificity requirement would be meaningless.[2837]

(iii) Evaluation by the Panel

7.1235 To be specific, a subsidy must be provided to a sufficiently limited "group" of enterprises or industries within the meaning of Article 2 of the SCM Agreement. Article 2 requires more than a simple demonstration that less than all of the enterprises or industries within the territory of a Member were eligible to receive the subsidy. In other words, it is not the case that any limitation whatsoever on access to a subsidy establishes specificity. Rather, it must be demonstrated that the subsidy is provided only to a *sufficiently limited* "group of enterprises or industries" in order to be specific within the meaning of Article 2. This interpretation is consistent with past WTO case law, and is also consistent with the understanding of both parties to this dispute.

7.1236 In *US – Upland Cotton,* the panel noted that beyond setting out the rather general requirement that the granting authority or its legislation explicitly limit access to the subsidy to certain enterprises, "Article 2 of the *SCM Agreement* does not speak with precision about when 'specificity' may be found".[2838] The panel in that case continued:

> "At some point that is not made precise in the text of the agreement, and which may modulate according to the particular circumstances of a given case, a subsidy would cease to be specific because it is *sufficiently* broadly available throughout an economy as not to benefit *a particular limited* group of producers of certain products. The plain words of Article 2.1 indicate that specificity is a general concept, and the breadth or narrowness of specificity is not susceptible to rigid quantitative definition. Whether a subsidy is specific can only be assessed on a case-by-case basis."[2839]

[2832] European Communities' second written submission, paras. 520-527.
[2833] European Communities' second written submission, paras. 528-529.
[2834] European Communities' second written submission, para. 530.
[2835] United States' first written submission, para. 396.
[2836] United States' first written submission, paras. 397-405.
[2837] United States' second written submission, paras. 119, 122.
[2838] Panel Report, *US – Upland Cotton*, para. 7.1139.
[2839] Panel Report, *US – Upland Cotton*, para. 7.1142 (emphasis added).

BCI deleted, as indicated **[***]**

7.1237 The panel decision in *US – Upland Cotton* indicates that the specificity analysis turns on a qualitative assessment of the extent to which a subsidy is "*sufficiently* broadly available" throughout an economy, i.e. whether it benefits a "*particular*" limited group of enterprises or industries. The analysis suggests that there is some tipping point, which varies on a case-by-case basis, at which access to the subsidy in issue is no longer considered to be limited to "certain enterprises" but rather is "*sufficiently* broadly available" throughout an economy as to be non-specific. In other words, the relevant question is not whether access to the subsidy is limited in any way at all, but rather where it is *sufficiently* limited for the purpose of Article 2 of the SCM Agreement.

7.1238 We further note that neither of the parties in this case, nor any third party in this case, has questioned this interpretation of Article 2 of the SCM Agreement. The European Communities argues that:

> "The critical question in the present case, however, is whether ATP funding is specific to a group of industries or to a group of enterprises. The European Communities has demonstrated that ATP funding is limited to the group of industries or group of enterprises engaged in R&D related to 'high risk, high pay-off, emerging and enabling technologies.' That is, the common relation or purpose, or similarity, amongst this group of industries or group of enterprises is that they engage in a specific type of R&D. It is clear that ATP funding is ... available only for the sub-set of US-produced goods that can be considered 'high risk, high pay-off, emerging and enabling technologies.' This sub-set represents a *sufficiently limited* portion of the US economy.
>
> Thus, ATP is not a subsidy that is '*sufficiently broadly* available throughout {the US} economy {so} as not to benefit a particular limited group of producers of certain products,' and consequently, ATP is specific within the meaning of Article 2.1 of the SCM Agreement."[2840]

7.1239 Along the same lines, the United States refers to a "limitation on the group that is *restrictive enough* to make it 'specific'".[2841]

7.1240 In the light of the foregoing, we consider that the term "group" in Article 2 of the SCM Agreement means *a sufficiently limited group*. This is how we use the term "group" in our evaluation of the European Communities' arguments. As the complaining party, the European Communities bears the burden of demonstrating that the subsidies provided to Boeing under the ATP are specific within the meaning of Article 2. The European Communities advances three arguments. We address these in turn.

> The ATP Rules refer to U.S. companies that perform research and development on "high risk, high pay-off, emerging and enabling technologies"

7.1241 The European Communities emphasizes that according to the ATP Rules, the purpose of the Program is "to assist United States businesses to carry out *research and development on high risk, high pay-off, emerging and enabling technologies*".[2842] For the following reasons, we do not believe that U.S. enterprises or industries that perform research and development on "high risk, high pay-off, emerging and enabling technologies" constitute a sufficiently limited group of enterprises or industries within the meaning of Article 2 of the SCM Agreement.

[2840] European Communities' comments on United States' response to question 48, paras. 177-178.
[2841] United States' response to question 142, para. 123.
[2842] ATP Rules, Exhibit EC-534, §§ 295.1(a), 295.6.

BCI deleted, as indicated **[***]**

7.1242 First, limiting funding to R&D into "high risk, high pay-off, emerging and enabling technologies" does not on its face appear to be a significant limitation to any group of enterprises or industries in the United States. Second, there is nothing in the relevant provision of the ATP Rules to suggest that this language operates as a significant limitation:

> "§ 295.1 Purpose.
>
> (a) The purpose of the Advanced Technology Program (ATP) is to assist United States businesses to carry out research and development on high risk, high pay-off, emerging and enabling technologies. *These technologies are*:
>
> (1) High risk, because *the technical challenges make success uncertain*;
>
> (2) High pay-off, because when applied *they offer significant benefits to the U.S. economy*; and
>
> (3) Emerging and enabling, because they offer *wide breadth of potential application and form an important technical basis for future commercial applications*." [2843]

7.1243 Along the same lines, other provisions of the ATP Rules suggest that this condition does not operate to limit R&D funding to a limited group of enterprises or industries. For example, section 295.6, which sets forth certain "eligibility criteria", provides that:

> "… The proposed technology must be *highly innovative*. The research must be *challenging*, with *high technical risk.* It must be aimed at *overcoming an important problem(s)* or exploiting a *promising opportunity*. The technical leverage of the technology must be adequately explained. The research must have a strong potential for advancing *the state of the art* and contributing significantly to *the U.S. scientific and technical knowledge base.* …"[2844]

7.1244 Third, the evidence before the Panel regarding the manner in which ATP funding has actually been expended further confirms that U.S. companies that perform research into "high risk, high pay-off, emerging and enabling technologies" are not a limited group of enterprises or industries:

- Since the programme began making project awards in 1990, it has made 768 project awards that extend across the fields of advanced materials and chemicals, biotechnology, electronics, computer hardware, and communications, information technology, and manufacturing.[2845]

- The 768 ATP projects include 168 in the field of advanced materials and chemicals, 190 in biotechnology, 167 pertaining to electronics, computer hardware, and communications, 156 in the information technology sector, and 87 pertaining to manufacturing of various types.[2846] Each of these sectors potentially comprises multiple industries and enterprises. For example, the manufacturing sector covers health care manufacturing such as digital radiology, photonics manufacturing, automobile manufacturing, and environmental technology manufacturing, among a host of other industries.

[2843] *Ibid* (emphasis added).
[2844] *Ibid* (emphasis added).
[2845] ATP Awards Summary Data - Awards 475 (Technology Area by Year), Factsheet 3.B1, Sept. 2004, Exhibit US-151.
[2846] ATP Awards Summary Data - Awards 475 (Technology Area by Year), Factsheet 3.B1, Sept. 2004, Exhibit US-151.

- The specific technologies that have resulted from ATP projects include, among others, animal and plant biotechnology, automobile manufacturing, bimolecular and biomimetic materials, computer hardware, diagnostic and therapeutic biotechnology, environmental technologies, imaging and image processing, intelligent control, marine biology, materials handling, nanotechnology, optics and photonics, and semiconductors.[2847]

- The ATP has disbursed more than $2.3 billion in funding since 1990.[2848] The total $2.3 billion of ATP funding from 1990 to 2004 has been similarly broadly distributed: $488 million has gone to projects in advanced materials and chemicals; $449 million to biotechnology; $576 million to electronics, computer hardware, and communications; $504 million to information technology; and $252 million to manufacturing.[2849]

7.1245 Fourth, we note that this language is found only in the ATP Rules. As noted above, the ATP statute states in more general terms that the ATP has the purpose:

> "… of assisting United States businesses in creating and applying the generic technology and research results necessary to--
>
> (1) commercialize significant new scientific discoveries and technologies rapidly; and
>
> (2) refine manufacturing technologies.
>
> The Secretary, acting through the Director, shall assure that the Program focuses on improving the competitive position of the United States and its businesses, gives preference to discoveries and to technologies that have great economic potential, and *avoids providing undue advantage to specific companies*. …"[2850]

7.1246 In sum, the evidence before us leads us to conclude that the reference to "high risk, high pay-off, emerging and enabling technologies" in the ATP Rules does not operate to limit subsidies granted under the ATP to a "group of enterprises or industries" within the meaning of Article 2 of the SCM Agreement.

The ATP statute refers to "solving generic problems of *specific industries*"

7.1247 The European Communities asserts that the ATP statute says that the Program's emphasis is "on solving generic problems of *specific industries*, and on making those industries more competitive in world markets".[2851] The European Communities also asserts, along the same lines, that the ATPA indicates that "these specific industries" include the fields of "high-resolution information systems, advanced manufacturing, and advanced materials".[2852]

7.1248 We believe that these statements are taken out of context. First, regarding the reference to "solving generic problems of specific industries", the provision of the ATP statute that European Communities relies on reads in relevant part:

[2847] ATP Funded Technologies, Exhibit US-152.
[2848] Historical Statistics on Applications and Awards, Factsheet 3.A1 (Sept. 2004), Exhibit US-153.
[2849] ATP Awards Summary Data - Funding (Technology Area by Year), Factsheet 3.B2 (Sept. 2004), Exhibit US-168.
[2850] ATP Statute, Exhibit EC-532, § 278n(a) (emphasis added).
[2851] ATP Statute, Exhibit EC-532, § 278n(b)(1)(B).
[2852] ATPA, Exhibit EC-533, § 201(b)(1)(F).

BCI deleted, as indicated **[***]**

> "Under the Program established in subsection (a) of this section, and consistent with the mission and policies of the Institute, the Secretary, acting through the Director, and subject to subsections (c) and (d) of this section, may—
>
> (1) aid industry-led United States joint research and development ventures (hereafter in this section referred to as 'joint ventures') (which may also include universities and independent research organizations), including those involving collaborative technology demonstration projects which develop and test prototype equipment and processes, through—
>
> (A) provision of organizational and technical advice; and
>
> (B) participation in such joint ventures by means of grants, cooperative agreements, or contracts, if the Secretary, acting through the Director, determines participation to be appropriate, which may include (i) partial start-up funding, (ii) provision of a minority share of the cost of such joint ventures for up to 5 years, and (iii) making available equipment, facilities, and personnel,
>
> *provided* that *emphasis is placed* on areas where the Institute has scientific or technological expertise, *on solving generic problems* of specific industries, and on making those industries more competitive in world markets …" (emphasis added)

7.1249 Reading this provision in full, it is clear that it does not limit ATP funding to "specific industries", within the meaning of Article 2 of the SCM Agreement or otherwise.

7.1250 Second, the ATPA does not list "high-resolution information systems, advanced manufacturing, and advanced materials" as the "specific industries" that are eligible to receive ATP funding. The provision that the European Communities cites makes clear that these are illustrative of the fields of research that ATP funds. Section 201(b)(1)(F) states:

> "(F) it is vital that industry within the United States attain a leadership role and capability in development, design, and manufacturing *in fields such as* high-resolution information systems, advanced manufacturing, and advanced materials".[2853]

The eight projects at issue are each limited to a group of enterprises or industries

7.1251 Finally, the European Communities argues, in the alternative, that *each of the eight projects* at issue was limited to a "group of enterprises or industries".

7.1252 In the Panel's view, specificity must generally be analysed at the level of the subsidy programme pursuant to which individual payments are provided (where the subsidy take the form of a payment, and where it is provided pursuant to a wider programme), and not at the level of each individual payment taken in isolation, absent one or more reasons as to why an analysis at the level of the entire programme is not appropriate. To take a simple example, assume that a government provides a $100 grant to every enterprise in every industry in its territory, including company A. This would appear to be a textbook example of a subsidy that is not specific under Article 2 of the SCM Agreement. It would seem absurd to reason that the subsidy provide to company A is nonetheless specific under Article 2 because access to *that* subsidy, i.e. the *payment* to A taken in isolation, was limited to one company – i.e. to company A.

[2853] ATPA, Exhibit EC-533, § 201(b)(1)(F).

7.1253 The panel in *Japan – DRAMs* sought to avoid interpreting Article 2 of the SCM Agreement in such a way as to lead to this result:

> "... if an investigating authority were to focus on an *individual transaction*, and that transaction flowed from a *generally available support programme* whose normal operation would generally result in financial contributions on pre-determined terms (that are therefore not tailored to the recipient company), that individual transaction would not, in our view, become 'specific' in the meaning of Article 2.1 *simply because it was provided to a specific company*."[2854]

7.1254 Of course, the foregoing only applies where an individual payment is made pursuant to and flows from a broader, identifiable subsidy programme. To the extent that a financial contribution is not provided as part of any broader, identifiable subsidy programme, then specificity must necessarily be analysed at the level of the individual payments. In addition, as noted above, there may be one or more reasons as to why an analysis at the level of an entire programme is not appropriate. In this regard, the United States agrees that "it is not the case that specificity must always be examined at the highest level of aggregation of the activities of the granting authority" and that "it may be appropriate to analyze specificity at a lower level".[2855] The United States argues that this is a "fact-specific inquiry", and that "the complaining party must provide a reasoned basis for performing the analysis at that level".[2856] The European Communities seems to agree with these propositions.[2857]

7.1255 We have concluded above that the European Communities has failed to demonstrate that the ATP as a whole is specific under Article 2 of the SCM Agreement. Therefore, we consider the relevant question to be whether the European Communities has provided one or more reasons for examining specificity at the level of the individual projects at issue, rather than at the level of the entire ATP. Having carefully considered the evidence before us, we conclude that the European Communities has failed to identify any basis for doing so in the case of the ATP. We therefore conclude that, in the absence of any reasoned basis for conducting the specificity analysis at the level of the individual projects, the specificity analysis must be conducted at the level of the entire ATP. We recall that we have already rejected the European Communities' argument that the ATP as a whole is specific.

7.1256 In sum, we find that the European Communities has failed to demonstrate that the subsidies provided to Boeing under the ATP are specific within the meaning of Article 2 of the SCM Agreement.

(e) Conclusion

7.1257 **For these reasons, the Panel finds that the payments that DOC made to joint ventures / consortia in which Boeing participated through the Advanced Technology Program constitute subsidies within the meaning of Article 1 of the SCM Agreement. However, the Panel finds that**

[2854] Panel Report, *Japan – DRAMs (Korea)*, para. 7.374 (emphasis added). In *Japan – DRAMs (Korea)*, the main issue with respect to Article 2 was whether it was appropriate to analyse certain debt restructuring transactions with Hynix at the level of those individual restructurings (in which case it was axiomatic that the subsidies were specific to Hynix), or rather at the level of the broader framework legislation. Korea argued that the broader framework legislation (the "CRPA") was the "relevant program" for the purposes of the Article 2 analysis (which, if correct, would have likely led to a finding that the subsidy provided to Hynix was not specific.) The same issue, involving the same transactions, was addressed by the panel in *EC – Countervailing Measures on DRAM Chips*.

[2855] United States' response to question 50, para. 143.

[2856] United States' response to question 50, para. 143.

[2857] European Communities' comments on United States' response to question 50, para. 185.

BCI deleted, as indicated **[***]**

the European Communities has not demonstrated that these subsidies are specific within the meaning of Article 2 of the SCM Agreement.

8. NASA/DOD intellectual property right waivers/transfers

(a) Introduction

7.1258 The European Communities argues that NASA and DOD "transfer" to Boeing certain patent rights and data rights. The scope of the European Communities' claim is limited to these intellectual property rights over research performed *by Boeing* under its R&D contracts and agreements with NASA and DOD. The European Communities argues that this "transfer" of intellectual property rights is a subsidy within the meaning of Article 1 of the SCM Agreement, and is specific within the meaning of Article 2 of the SCM Agreement. The European Communities is unable to estimate the value of this alleged subsidy, but estimates that the value of 5 of the patents "transferred" to Boeing is $726 million over the period 1997-2022 (i.e. the last year when any of the five valued patents are in force).[2858]

7.1259 The United States argues that Boeing's retention of certain intellectual property rights under NASA and DOD R&D contracts and agreements is not a subsidy within the meaning of Article 1 of the SCM Agreement, and is not specific within the meaning of Article 2 of the SCM Agreement.

(b) The measures at issue

7.1260 The European Communities' panel request[2859] states that NASA provides a subsidy to Boeing by enabling Boeing "to exploit the results" of research programmes "by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ("LERD") or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research", by "granting the US LCA industry exclusive or early access to data, trade secrets, and other knowledge resulting from government funded research", and by "allowing the US LCA industry to exploit the results of government funded research, including, but not limited to, the foregoing or waiving of valuable patent rights or rights in data as such".

7.1261 With respect to DOD, the European Communities' panel request[2860] states in similar terms that DOD provides a subsidy to Boeing by enabling Boeing "to exploit the results" of DOD-funded research, "by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research", and "by allowing the US LCA industry to exploit the results of government funded research, including, but not limited to, the foregoing or waiving of valuable patent rights or rights in data as such".

7.1262 The European Communities' panel request indicates that NASA and DOD accord this treatment to Boeing pursuant to the following laws, regulations, and other measures (some of which are specific to NASA, some of which are specific to DOD, some of which concern patents, and some of which concern data rights):

[2858] Amount of Subsidies to Boeing's LCA Division , Exhibit EC-17; Estimates of Benefits from Patent Waivers/Transfers to Boeing/MD, Exhibit EC-20.

[2859] WT/DS353/2, items 2(a), 2(f), 2(g), pp. 6, 8, and 9.

[2860] WT/DS353/2, items 3(a), 3(d), pp. 9 and 11.

- 35 U.S.C. §§ 200 *et seq.*;
- Memorandum to the Heads of Executive Departments and Agencies: Government Patent Policy, Pub. Papers 248 (18 February 1983);
- Executive Order 12591 (10 April 1987);
- 14 CFR §§ 1245.100 *et seq.*;
- 14 CFR §§ 1274.911 - 1274.914;
- 48 CFR §§ 27.300 *et seq.*;
- 48 CFR §§ 27.400 *et seq.*;
- 48 CFR §§ 227.7100 *et seq.*
- 48 CFR §§ 227.303 *et seq.*;
- *Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information*, section 4.5.7.1 (NPG 2200.2A)

7.1263 In response to a Panel question, the European Communities clarifies that it is challenging all patents transferred / waived to Boeing under any and all R&D contracts and agreements that Boeing entered into with NASA and DOD, including but not limited to those entered into under the specific NASA and DOD R&D programmes listed in the European Communities' panel request. According to the European Communities:

> "... from the outset of this dispute, the European Communities has been challenging as a specific subsidy the provision of *all* patents to Boeing by NASA and DOD pursuant to *all* NASA and DOD contracts, *even if they derive from programmes that are not being specifically challenged*."[2861]

7.1264 With respect to the allocation of "data rights", the scope of the European Communities' claim is limited to the treatment accorded under NASA R&D contracts and agreements with Boeing containing "Limited Exclusive Rights Data" (LERD) clauses, and to DOD R&D contracts and agreements with Boeing under which DOD acquired only "limited", "government-purpose" rights in the data (as opposed to "unlimited rights data"). The European Communities has explained that it is not otherwise challenging the allocation of data rights under NASA or DOD R&D contracts and agreements with Boeing:

> "To be clear, with respect to NASA, the European Communities is challenging as a subsidy the protection of government-funded data rights on behalf of Boeing only pursuant to the Limited Exclusive Rights Data ('LERD') clauses of the ACT, HSR, AST, and R&T Base programs.[2862] The United States acknowledges that, with respect to LERD, 'Boeing and other contractors negotiated to limit the *otherwise unlimited rights that the U.S. government would normally have* in specifically identified data developed in the course of the contracted research.'[2863] Consequently, NASA provides 'goods other than general infrastructure' within the meaning of Article 1.1(a)(1)(iii), as data rights are a type of intellectual property right that NASA would ordinarily own, but which NASA has provided to Boeing through LERD provisions.
>
> With respect to provision of data rights by DOD, the European Communities is challenging the practice of providing data rights to Boeing in instances where the Government has funded, at least in part, the R&D resulting in those rights.[2864] During

[2861] European Communities' response to question 216, para. 386 (emphasis added).
[2862] (*footnote original*) First Written Submission by the European Communities, para. 838.
[2863] (*footnote original*) First Written Submission by the European Communities, para. 352 (emphasis added).
[2864] (*footnote original*) First Written Submission by the European Communities, para. 839.

> the term of the data rights, the Government 'may not use, or authorize other persons to use, technical data … for commercial purposes,' while the rights of Boeing to this data is unlimited.[2865]" [2866]

7.1265 With respect to "trade secrets", which appears to be a subset of data rights, the scope of the European Communities' claim is limited to NASA.[2867]

(c) Arguments of the European Communities

7.1266 In its first written submission, the European Communities argues that the transfers of valuable intellectual property rights to Boeing, including patents, rights to trade secrets, and rights to data, by NASA and DOD, constitute financial contributions within the meaning of Article 1.1(a)(1) of the SCM Agreement. According to the European Communities, such transfers constitute a provision of goods within the meaning of Article 1.1(a)(1)(iii). In this regard, the European Communities explains that the term "good" is defined as "{p}roperty or possessions", that patents and the other rights at issue are generally considered intellectual *property* and are covered as such by the TRIPS Agreement, and that United States law explicitly states that "patents shall have the attributes of personal *property*". [2868] The European Communities argues, in the alternative, that these intellectual property right transfers constitute the "foregoing of government revenue" that is "otherwise due" within the meaning of Article 1.1(a)(1)(ii), as entities making use of a government's intellectual property rights "would ordinarily need to pay license fees for such use". For example, when an entity seeks to use technology patented by NASA or DOD, it must ordinarily negotiate a license requiring, *inter alia*, payment of royalties.[2869]

7.1267 In its second written submission, the European Communities responds to the United States' argument that NASA and DOD patent and data rights transfers/waivers do not constitute a financial contribution because under U.S. patent and copyright law, the rights retained by the contractor and its employees "belong to them in the first place".[2870] With respect to patent rights, the European Communities argues that, under the applicable law and regulations, the patent rights are neither "guaranteed to the contractor and its employees," nor did they ever "belong{} to them in the first place". The European Communities reviews the policies and practice of both NASA and DOD in order to demonstrate that, absent a waiver, the patent owner is the U.S. Government, not the contractor.[2871] The European Communities argues that the same is true of the data rights it challenges. In this regard, the European Communities clarifies that it is only challenging as a subsidy the protection of government-funded data rights on behalf of Boeing pursuant to the Limited Exclusive Rights Data ("LERD") clauses in the case of NASA, and DOD's practice of providing data rights to Boeing in instances where the government has funded, at least in part, the R&D resulting in those rights.[2872]

7.1268 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that NASA/DOD "intellectual property right waivers/transfers" confer "benefits" on Boeing's LCA division. The European Communities argues that: (i) the financial contributions "relate, at least in part, to the production of all Boeing LCA";

[2865] (*footnote original*) First Written Submission by the European Communities, para. 839, citing 48 C.F.R. § 227.7103-5(b)(4), Exhibit EC-590; First Written Submission of the United States, para. 353.
[2866] European Communities' second written submission, paras. 546-547.
[2867] European Communities' first written submission, para. 833.
[2868] European Communities' first written submission, para. 841.
[2869] European Communities' first written submission, para. 842.
[2870] United States' first written submission, paras. 324, 355-356.
[2871] European Communities' second written submission, paras. 538-541.
[2872] European Communities' second written submission, paras. 546-547.

(ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required to pay anything in return" for these intellectual property right waivers/transfers; (iv) Boeing has received valuable "knowledge and experience" from the aeronautics R&D, and (v) these are rights that Boeing "would not be able to obtain on the market without purchasing or licensing them for fair market value, and therefore represent "free" property rights for Boeing".[2873]

7.1269 In its second written submission, the European Communities responds to the United States' arguments regarding benefit. First, the European Communities argues that a WTO Member cannot avoid all disciplines of the SCM Agreement by simply asserting without any support that every aspect of that contract was market-based and negotiated at arms-length.[2874] Second, the intellectual property provision/waiver policies, as adapted for large businesses like Boeing, were implemented in order to "improve the productivity of the U.S. economy, create new jobs, and improve the position of the U.S. in world trade", at least according to the President of the United States; they were *not* implemented because the government "was having a hard time finding contractors to take the Government's money".[2875] Third, the European Communities argues that the allocation of intellectual property rights under NASA/DOD R&D contracts and agreements deviates from normal commercial practice because "{g}enerally, when private corporations fund other entities to carry out research on their behalf, they retain full rights to any intellectual property created".[2876] In support of that assertion, the European Communities refers to an article on intellectual property rights and stem cell research[2877] and a Declaration of Regina Dieu, Legal Counsel in the Airbus SAS Industrial procurement Legal Department, which states that when Airbus funds and R&D project it exclusively and solely owns any and all Intellectual Property generated or acquired in connection with and during the performance of the R&D project.[2878] In addition, the European Communities refers[2879] to an article on collaborative research[2880], a WIPO Training Course[2881] and a contract concluded by Boeing with the National Institute for Aviation Research at Wichita State University.[2882]

7.1270 Regarding specificity, the European Communities argues that NASA and DOD intellectual property right waivers/transfers are specific within the meaning of Article 2.1(a) of the SCM Agreement. The European Communities argues that the legislative authority for NASA's R&D programmes (pursuant to which the intellectual property is created) derives from the Space Act, which limits those programmes to those industries that can satisfy the objectives of that Act. Accordingly, NASA's intellectual property right transfers, which all derive from NASA-funded R&D, are specific to the enterprises that participate in aeronautics and space-related R&D. Likewise, DOD's intellectual property right transfers all derive from DOD-funded R&D, which is specific to the group of defense-related industries capable of conducting these specialized activities.[2883] The European Communities

[2873] European Communities' first written submission, paras. 849-851.
[2874] European Communities' second written submission, paras. 549-550, 552.
[2875] European Communities' second written submission, paras. 551, 559.
[2876] European Communities' second written submission, para. 553.
[2877] Sean M. O'Connor, "Intellectual Property Rights and Stem Cell Research: Who Owns the Medical Breakthroughs?" 39 New Eng. L. Rev. 665 (2005), Exhibit EC-1212, p. 669.
[2878] Declaration of Regina Dieu, 8 November 2007, Exhibit EC-1178.
[2879] European Communities' second written submission, paras. 553-556.
[2880] Rochelle Cooper Dreyfuss, "Collaborative Research: Conflicts on Authorship, Ownership and Accountability", 53 Vand. L. Rev. 1161 (2000), Exhibit EC-1228, p. 1212.
[2881] WIPO-MOST, "Intermediate Training Course on Practical Intellectual Property Issues in Business", 13 November 2003, Exhibit-EC 1229, pp. 42-43.
[2882] Contract Between Boeing Commercial Airplane Group Wichita Division and Wichita State University, Contract No. 000051728, 4 November 2002, Exhibit EC-1231.
[2883] European Communities' first written submission, paras. 852-853.

also argues that the intellectual property rights transfers are de facto specific under Article 2.1(c) of the SCM Agreement, on the basis of Boeing's share of NASA and DOD R&D contracts.[2884]

7.1271 In its second written submission, the European Communities responds to the United States' rebuttal arguments on specificity by reasoning that it is not relevant if other U.S. government agencies follow the same practices as NASA and DOD with regard to the allocation of intellectual property rights. The European Communities argues that "{i}t is important to recall that Article 2.1(a) provides two options (as reflected by use of the word "or") by which the complainant may demonstrate *de jure* specificity – i.e. the complainant can show *either* that "the granting authority … explicitly limits access to a subsidy to certain enterprises" *or* that "the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy to certain enterprises". The European Communities explains that the "second option does not, however, refer to the "legislation pursuant to which the *subsidy programme* operates," but it refers instead to the "legislation pursuant to which the *granting authority* operates". The European Communities reiterates that "the granting authorities at issue here are NASA and DOD, and they operate pursuant to their own sets of laws and regulations, such as the NASA Space Act".[2885]

(d) Arguments of the United States

7.1272 The United States argues that NASA and DOD patent and data rights transfers/waivers do not constitute a financial contribution because under U.S. patent and copyright law, the rights retained by the contractor and its employees "belong to them in the first place".[2886] Thus, NASA and DOD do not provide any "contribution" to Boeing, financial or otherwise. Rather, it is Boeing that transfers certain intellectual property rights to NASA and DOD under the R&D contracts and agreements at issue when it grants the government a royalty-free license to use any inventions and data produced under the contract or agreement. Regarding patent rights, the United States argues that the European Communities' allegation that DOD and NASA made a financial contribution by "transferring" or "waiving" of patent rights fails on several counts. At the most basic, "it is the inventor that holds the patent right in the first place", and the only possible "transfer of rights" as a result of the contract begins with the inventor and proceeds to the government, and not *vice versa*. In addition, the European Communities is mistaken in asserting that the assignment of patent rights under a government contract is the provision of a good under Article 1.1(a)(1)(iii) of the SCM Agreement or the foregoing of government revenue otherwise due under Article 1.1(a)(1)(ii) of the SCM Agreement.[2887] Regarding data rights, the United States argues along the same lines that there cannot be a "provision" for purposes of Article 1.1(a)(1)(iii) when the government confirms the data generator's rights and provides nothing additional, and as DOD and NASA merely allowed Boeing to retain the intellectual property rights to which it was entitled under general copyright law, the agencies did not "forego any revenue" within the meaning of Article 1.1(a)(1)(ii).[2888]

7.1273 The United States reiterates this argument in its second written submission, arguing that "the EC assertion that the Government conveyed intellectual property rights to Boeing reverses what actually occurred – that Boeing conveyed intellectual property rights to the Government".[2889] The United States reiterates that intellectual property rights are not goods within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement, such that even if there were a "transfer" of intellectual

[2884] European Communities' first written submission, paras. 854-855.
[2885] European Communities' second written submission, para. 577.
[2886] United States' first written submission, paras. 324, 355-356.
[2887] United States' first written submission, para. 317.
[2888] United States' first written submission, para. 356.
[2889] United States' second written submission, paras. 100-105.

property rights from NASA/DOD to Boeing, such a "transfer" would not constitute a provision of "goods" within the meaning of that provision.[2890]

7.1274 Regarding the existence of a benefit, the United States argues in its first written submission that even if the Panel were to conclude that there is a financial contribution, "the treatment identified by the EC does not confer a benefit". The United States argues that the value of the patent rights is incorporated in the exchange of value that the government and contractor agree upon in negotiating the initial contract.[2891] The United States further argues that "even if considered in isolation, the patent clauses in U.S. government contracts indicate a rough balance between the parties".[2892] The United States also takes issue with the European Communities' attempt to derive benefit under Article 1.1(b) of the SCM Agreement based on an *ex post facto* consideration of the value of the intellectual property rights under certain contracts and agreements.[2893] In its second written submission, the United States argues that the European Communities has provided no support for its assertion that the allocation of intellectual property rights under NASA and DOD R&D contracts and agreements is contrary to what market participants would have negotiated at arms-length according to relevant market benchmarks.[2894]

7.1275 Regarding specificity, the United States argues that NASA/DOD intellectual property rights "transfers" are not specific within the meaning of Article 2 of the SCM Agreement. According to the United States, the treatment of which the European Communities complains – i.e. the retention by NASA contractors of their patent rights – arises under the NASA procurement regulations and the patent waiver regulations, which in turn look to the policy established in the Presidential Memorandum of 18 February 1983 and Executive Order 12591. The United States explains that those authorities "apply generally to all federal departments and agencies", and "the substantive treatment" in question is not specific to aeronautics and space R&D but rather is "the same as the treatment of all contractors under U.S. government R&D contracts". In the United States' view, nothing in Article 2.1(a) or (b) suggests that "the use of agency-specific procedures detracts from the general availability of the substantive treatment it affords". The United States argues that this point applies with even greater force to DOD.[2895] The United States also responds to the European Communities' arguments regarding de facto specificity, arguing that the European Communities has failed to demonstrate that Boeing obtained a disproportionate share of R&D funding from NASA and DOD.[2896] In its second written submission, the United States reiterates that "the law and the 1983 Presidential Memorandum make access to this treatment available to *all* government R&D contractors, without limitation to a specific enterprise or industry or group of enterprises or industries".[2897]

(e) Evaluation by the Panel

(i) Patent rights

7.1276 The Panel does not consider it necessary to resolve the issue of whether the allocation of patent rights under NASA/DOD R&D contracts and agreements constitutes a financial contribution that confers a benefit within the meaning of Article 1 of the SCM Agreement, because in the Panel's view it is clear that the allocation of patent rights under NASA and DOD contracts and agreements is not specific to a "group of enterprises or industries" within the meaning of Article 2 of the SCM Agreement. The reason is that the allocation of patent rights is uniform under all U.S. government

[2890] United States' first written submission, para. 331; United States' response to question 127.
[2891] United States' first written submission, paras. 326-328.
[2892] United States' first written submission, paras. 326-329.
[2893] United States' first written submission, paras. 330-331.
[2894] United States' second written submission, paras. 106-107.
[2895] United States' first written submission, paras. 335-336.
[2896] United States' first written submission, paras. 338-339.
[2897] United States' second written submission, para. 108.

R&D contracts, agreements, and grants, in respect of all U.S. government departments and agencies, for all enterprises in all sectors. In all cases, the contractor / partner / recipient owns any inventions (i.e. patent rights) that it conceives in the course of performing research funded by the U.S. Government; however the U.S. Government receives a royalty-free, "government use/purpose" license to use the subject invention.

7.1277 Prior to 1980, the United States had a general policy of taking all rights to patents over inventions produced by contractors under federally-funded R&D contracts (and then granting nonexclusive licenses to any applicant, including the contractor, that wished to use the subject invention).[2898] In 1980, the U.S. Government changed its policy governing the allocation of patent rights under federally-funded R&D contracts, and started granting government contractors ownership of patents over any invention that they produced with federal funding under R&D contracts (with the government receiving a limited "government use" license to use the subject invention without having to pay the Contractor any royalties.) Originally, the new policy applied only to non-profit organizations and small business firms. The policy was subsequently extended so as to accord the same treatment to encompass all government contractors, regardless of size and profit/non-profit status.

7.1278 The policy was implemented through a number of different legal instruments. For present purposes, five different legal instruments are relevant:

(a) the so-called **Bayh-Dole Act**, which implemented the policy in 1980, and which is codified in 35 U.S.C. §§ 200-212 (entitled "Patent Rights in Inventions Made with Federal Assistance")[2899];

(b) a 1983 **Presidential Memorandum** to the heads of executive departments and agencies (entitled "Government Patent Policy") that extended the scope of the policy to encompass all government contractors, regardless of size and profit/non-profit status[2900];

(c) a 1987 **Executive Order** (entitled "Facilitating access to science and technology") into which the terms of the 1983 Presidential Memorandum were eventually incorporated[2901];

(d) the corresponding **general federal regulations** implementing the Bayh-Dole Act, the 1983 Presidential Memorandum, and the 1987 Executive Order, which are found at 48 C.F.R. §§ 27.300-27.306 (entitled "Patent Rights Under Government Contracts")[2902];

(e) the **NASA-specific regulations** (entitled "Patents and Other Intellectual Property Rights", with Subpart 1 entitled "Patent Waiver Regulations") embodied in 14 C.F.R. §§ 1245 implementing this policy[2903].

7.1279 The rationale behind the rules governing the allocation of patent rights in U.S. government-funded R&D contracts and agreements is set out in the **Bayh-Dole Act** (which applies only to non-profit organizations and small business firms) under the heading "Policy and Objective" (§ 200):

[2898] European Communities' first written submission, para. 806; United States' first written submission, para. 314.
[2899] Exhibit EC-558.
[2900] Exhibit EC-560.
[2901] Exhibit EC-561.
[2902] Exhibit EC-559.
[2903] Exhibit EC-572.

BCI deleted, as indicated **[***]**

> "It is the policy and objective of the Congress to use the patent system to promote the utilization of inventions arising from federally supported research or development; to encourage maximum participation of small business firms in federally supported research and development efforts; to promote collaboration between commercial concerns and nonprofit organizations, including universities; to ensure that inventions made by nonprofit organizations and small business firms are used in a manner to promote free competition and enterprise without unduly encumbering future research and discovery; to promote the commercialization and public availability of inventions made in the United States by United States industry and labor; to ensure that the Government obtains sufficient rights in federally supported inventions to meet the needs of the Government and protect the public against nonuse or unreasonable use of inventions; and to minimize the costs of administering policies in this area."

7.1280 The 1983 **Presidential Memorandum** that extended Bayh-Dole treatment to all contractors regardless of size and profit/non-profit status was accompanied by a "fact sheet" which explained that:

> "Inventions developed under Government support constitute a valuable national resource. With appropriate incentives, many of these inventions will be further developed commercially by the private sector. The new products and processes that result will improve the productivity of the U.S. economy, create new jobs, and improve the position of the U.S. in world trade. The policy established by the Memorandum is designed to provide such incentives."

7.1281 The 1987 **Executive Order** entitled "Facilitating access to science and technology" reads in relevant part:

> "Section 1. Transfer of Federally Funded Technology.
>
> (a) The head of each Executive department and agency, to the extent permitted by law, shall encourage and facilitate collaboration among Federal laboratories, State and local governments, universities, and the private sector, particularly small business, in order to assist in the transfer of technology to the marketplace.
>
> (b) The head of each Executive department and agency shall, within overall funding allocations and to the extent permitted by law:
>
> ...
>
> (4) promote the commercialization, in accord with my Memorandum to the Heads of Executive Departments and Agencies of February 18, 1983, of patentable results of federally funded research by granting to all contractors, regardless of size, the title to patents made in whole or in part with Federal funds, in exchange for royalty-free use by or on behalf of the government."

7.1282 The general and NASA-specific implementing regulations (i.e. (d) and (e) above) articulate the rationale behind the allocation of patent rights in similar terms.

7.1283 The rules governing the allocation of patent rights under U.S. government-funded R&D contracts and agreements have remained essentially unchanged since the passage of the Bayh-Dole Act.[2904]

7.1284 The U.S. laws and regulations referred to above grant government contractors the option to retain title, with some limitations, to inventions that arise from a funding agreement with the U.S. Government.[2905] Contractors receive patent rights covering technologies "conceived or first actually reduced to practice in the performance of work" under "any contract, grant, or cooperative agreement entered into between any Federal agency … and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal Government".[2906]

7.1285 These patent rights authorize the contractor to prevent all other entities from exploiting the technologies claimed by the patent, and allow the company to license the technology to others in exchange for compensation. Specifically, a U.S. patent accords the rights to "exclude others from making, using, offering for sale, or selling" the invention in the United States or "importing" the invention into the United States, for a limited period of time (i.e. currently a minimum of 20 years from date of application).[2907] In addition, as the owner of the patent, the contractor also has the right to assign, or transfer by succession, the patent and to conclude licensing contracts with third parties. However, there is a limitation on the contractor providing an exclusive license to third parties: "any products embodying the subject invention or produced through the use of the subject invention {must} be manufactured substantially in the United States".[2908]

7.1286 The U.S. Government receives "a nonexclusive, nontransferable, irrevocable paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world".[2909] The U.S. Government patent rights take the form of a license to use the invention for any "government use," which includes use of the patent by any government contractor engaged in "government business". This license does not extend to any right to develop patented technology for commercial sale.[2910] The U.S. Government also obtains certain "march-in" rights, a provision that empowers the Federal agency to compel the contractor, in certain limited circumstances, to grant a license to applicants on terms that are reasonable under the circumstances, or to grant the license itself. No U.S. government department or agency has ever exercised these march-in rights for any patent under any contract.[2911]

7.1287 The Space Act provides that any invention made pursuant to a contract with NASA "shall be the exclusive property of the United States, and if such invention is patentable a patent therefore shall be issued to the United States" unless waived by NASA.[2912] To comply with President Reagan's 1983 **Executive Memorandum** referred to above, NASA formulated regulations under which it generally waives its patent rights to large companies, such as Boeing, for inventions developed pursuant to

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[2904] United States' first written submission, para. 319.

[2905] European Communities' first written submission, para. 810 (citing 35 U.S.C. § 202(a), Exhibit EC-558, and 48 C.F.R. § 27.302, Exhibit EC-559).

[2906] European Communities' first written submission, para. 811 (citing 35 U.S.C. § 201(e) and (b), Exhibit EC-558).

[2907] European Communities' first written submission, para. 812 (citing 35 U.S.C. § 154(a)(2), Exhibit EC-562, and 35 U.S.C. § 271(a), Exhibit EC-563).

[2908] European Communities' first written submission, para. 815 (citing 35 U.S.C. § 204, Exhibit EC-558).

[2909] European Communities' first written submission, para. 813 (citing 35 U.S.C. § 202(c)(4), Exhibit EC-558, and 48 C.F.R. § 27.302(c), Exhibit EC-559).

[2910] European Communities' first written submission, para. 813.

[2911] European Communities' first written submission, para. 814.

[2912] 42 U.S.C. § 2457(a), Exhibit EC-571.

NASA-funded research.[2913] Pursuant to these **NASA-specific regulations**, NASA waives such rights in order to, in part, "promote early utilization, expeditious development and continued availability of {the} new technology for commercial purposes ...".[2914] The NASA patent waiver regulations permit requests for waivers at two points in time: (i) in advance of the invention, as to any and all of the inventions that may be made under a contract; and (ii) after the reporting of an invention, subsequent to the invention being made.[2915]

7.1288 When NASA waives patent rights, it formally executes this waiver through an "instrument of waiver", which states, for example, as follows:

> "{t}he Administrator waives the property rights of the United States Government in the United States of America and in the following countries: …, and hereby conveys to the waiver recipient the entire right, title, and interest in and to each invention which may be conceived or first actually reduced to practice in the performance of work under the above-identified contract …."[2916]

7.1289 The regulations provide a general presumption that a timely waiver request will be granted to U.S. companies "unless the {NASA Inventions and Contributions} Board finds that the interests of the United States will be better served by restricting or eliminating all or part of the rights of the contractor" in certain enumerated situations.[2917] The regulations address the situations in which patents might not be waived, including instances when "the contractor is not located in the United States or does not have a place of business in the United States".[2918] According to a study by the National Bureau of Economic Research, by the early 1980s patent "waivers were essentially automatically granted" by NASA.[2919]

7.1290 According to the United States, the patent rights clauses that NASA and DOD use in their R&D contracts and agreements are "standardized for both agencies".[2920] NASA maintains different clauses for large and medium contractors, as opposed to small businesses, universities, and other research institutions, but the clauses are standard as to each group.[2921] The NASA procurement regulations require the insertion of one of two different clauses, 1852.227-70 (New technology) and 1852.227-71 (Requests for waiver of rights to inventions), into NASA contracts with medium and large contractors.[2922] These are among the numerous standardized clauses incorporated by reference in NASA R&D contracts and agreements.[2923]

[2913] 14 C.F.R. §§ 1245.100 *et. seq.*, § 1245.103, Exhibit EC-572. The regulations do not apply to small business firms or non-profit organizations, which are governed by the U.S. patent law provisions on government transfer of patents (35 U.S.C. §§ 200-212, Exhibit EC-558). See also, 14 C.F.R. § 1245.101, Exhibit EC-572.

[2914] 14 C.F.R. § 1245.103(a), Exhibit EC-572. As with patents transferred pursuant to the U.S. patent laws, the patent rights waived by NASA pursuant to their regulations are not unlimited, as NASA retains the right to use the patented technology for itself, or to issue compulsory licenses through "march-in" rights.

[2915] 14 C.F.R. §§ 1245.104, 1245.105, Exhibit EC-572.

[2916] NASA, Instrument of Waiver (Domestic and Foreign Rights), Structures and Materials Technology for Aerospace Vehicles, Exhibit EC-1227.

[2917] 14 C.F.R. § 1245.104(b), Exhibit EC-572. See also, § 1245.105(b)(1), Exhibit EC-572.

[2918] 14 C.F.R. § 1245.104(b)(1), Exhibit EC-572.

[2919] National Bureau of Economic Research, Evidence from Patents and Patent Citations on the Impact of NASA and other Federal Labs on Commercial Innovation, May 1997, Exhibit EC-574, p. 8.

[2920] United States' first written submission, para. 328.

[2921] United States' first written submission, para. 328, footnote 436.

[2922] United States' first written submission, para. 322.

[2923] See e.g. NASA Contract NAS1-18889 with Boeing Commercial Airplanes for Research and Development in Advance Technology Composite Aircraft Structures, 12 May 1989, Exhibit EC-329, p. 10, incorporating NASA/FAR Supplement clause number 18-52.227-70 entitled "New Technology (APR 1988)".

BCI deleted, as indicated **[***]**

7.1291 Unlike NASA, DOD does not have its own detailed regulations regarding patent transfers to large companies. Instead, DOD generally relies on the relevant portion of the Bayh-Dole Act and the 1983 Executive Memorandum expanding the policy to large business firms[2924], as well as the corresponding general regulations implementing these instruments.[2925] The relevant provision of the Bayh-Dole Act is 35 U.S.C. § 202(a), as expanded to large businesses by the 1983 Executive Memorandum, which provides that a contractor "may … elect to retain title to any {government-funded} invention", unless DOD decides to remove this possibility under certain circumstances.[2926] The DOD could opt to remove the choice of "election", for example, "in exceptional circumstances when it is determined by the agency that restriction or elimination of the right to retain title to any subject invention will better promote the policy and objectives of this chapter".[2927]

7.1292 As noted above, according to the United States, the patent rights clauses that NASA and DOD use in their R&D contracts and agreements are "standardized for both agencies".[2928] According to the United States, DOD uses standardized clauses in all of the contracts it signs, and "equivalent clauses" in agreements.[2929] This aspect of U.S. law, along with the terms of the 1983 Executive Memorandum, is generally implemented by DOD through incorporating certain contract clauses into R&D contracts. In the case of R&D contracts with medium or large business, DOD uses standard clause 52.227-12 (Patent Rights – Retention by the Contractor (Long Form).[2930] As with the patent provisions of NASA contracts, these are among the numerous standardized clauses incorporated by reference into the contracts.[2931]

7.1293 In the Panel's view, NASA's agency-specific regulations for implementing this U.S. Government-wide policy cannot, for the purposes of Article 2 of the SCM Agreement, be analysed in isolation from the broader policy and legal framework that they implement. There are a number of problems with the European Communities' approach of restricting the specificity analysis to the measure through which NASA implements this U.S. Government-wide policy. First, the approach to specificity advocated by the European Communities would lead to anomalous results. For instance, if a granting authority were to introduce a broadly available subsidy through a single piece of legislation, on the European Communities' approach this subsidy would not be specific within the meaning of Article 2. However, if the granting authority were to introduce exactly the same broadly available subsidy, but were to extend it to each industry by passing separate pieces of legislation, this would result in a finding of specificity if the complainant defined the measure under challenge as only one of the pieces of legislation. As the United States points out in its submissions, the European Communities is perhaps conflating the "issue of an element of a claim (whether a measure

[2924] The U.S. patent law provisions regarding "patent rights in inventions made with federal assistance", codified at 35 U.S.C. §§ 200-212, apply to any "Federal agency". 35 U.S.C. § 201(a), Exhibit EC-558. "Federal agency" is defined as "any executive agency as defined in section 105 of title 5, and the military departments as defined by section 102 of title 5". *Id.* In turn, Section 102 of title 5 provides that the military departments consist of the Army, Navy, and Air Force. 5 U.S.C. § 102, Exhibit EC-581.

[2925] 48 C.F.R. §§ 27.300-27.306, Exhibit EC-559. These provisions, which are part of the Federal Acquisition Regulation ("FAR") System, apply to "all executive agencies," which is defined to include DOD. 48 C.F.R. § 1.101 (purpose of FAR), Exhibit EC-582; 48 C.F.R. § 2.101 (defining "executive agency"), Exhibit EC-583.

[2926] 35 U.S.C. §§ 200-212, "Patent Rights in Inventions Made with Federal Assistance", § 202(a), Exhibit EC-558.

[2927] 35 U.S.C. § 202(a), Exhibit EC-558.

[2928] United States' first written submission, para. 328.

[2929] United States' first written submission, para. 338.

[2930] United States' first written submission, para. 321.

[2931] See e.g. Air Force Contract F33615-91-C-5716 with Boeing regarding Design and Manufacturing of Low Cost Composite Fuselage, 24 July 1991, Exhibit EC-507, p. 27 (incorporating by reference FAR contract clause 18-52.227-12 entitled "Patent Rights – Retention by the Contractor (Long Form) (JUN 1989)".)

is a subsidy) and the evidence (what needs to be shown to establish the claim)".[2932] The approach advocated by the European Communities means that the specificity analysis is dependent upon how the complaining party chooses to define the measure it is challenging.

7.1294 For these reasons, the Panel finds that, assuming *arguendo*[2933] that the allocation of patent rights under NASA/DOD R&D contracts and agreements with Boeing involves a subsidy within the meaning of Article 1 of the SCM Agreement, the European Communities has failed to demonstrate that any such subsidy is specific within the meaning of Article 2 of the SCM Agreement.

(ii) Data rights and trade secrets

7.1295 The Panel will now address the European Communities' argument that the allocation of data rights (including trade secrets) constitutes a specific subsidy. We will begin with an explanation of the types of "data rights" challenged by the European Communities in this dispute, namely, "Limited Exclusive Rights Data" and "limited" government rights data treatment. We then address the question of whether the European Communities has provided any evidence of such treatment outside of the context of the eight NASA R&D programmes and 23 DOD RDT&E programmes that it has challenged. We then address the question of whether the LERD and "limited" government data rights treatment accorded to Boeing under the challenged programmes can be analysed and found to constitute a separate, additional financial contribution in the light of our already having found that the payments and access to facilities provided to Boeing under the same set of contracts and agreements

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[2932] United States' comments on European Communities' response to question 34, para. 116.

[2933] In *China – Publications and Audiovisual Products*, the Appellate Body offered the following guidance on the use of *arguendo* assumptions by panels:

> "We observe that reliance upon an assumption *arguendo* is a legal technique that an adjudicator may use in order to enhance simplicity and efficiency in decision-making. Although panels and the Appellate Body may choose to employ this technique in particular circumstances, it may not always provide a solid foundation upon which to rest legal conclusions. Use of the technique may detract from a clear enunciation of the relevant WTO law and create difficulties for implementation. Recourse to this technique may also be problematic for certain types of legal issues, for example, issues that go to the jurisdiction of a panel or preliminary questions on which the substance of a subsequent analysis depends."
>
> Appellate Body Report, *China – Publications and Audiovisual Products*, para. 213.

We have relied upon the *arguendo* assumption that the allocation of patent rights is a subsidy within the meaning of Article 1 of the SCM Agreement and proceeded directly to the issue of specificity under Article 2 of the SCM Agreement for the following reasons. First, the question of whether the allocation of patent rights under NASA/DOD R&D contracts and agreements with Boeing constitutes a financial contribution, whether in the form of a provision of goods within the meaning of Article 1.1(a)(1)(iii) of the SCM Agreement or otherwise, is a potentially difficult one; in contrast, the question of whether the alleged subsidy is specific is more straightforward. (On the question of whether the allocation of patent rights under NASA/DOD R&D contracts and agreements with Boeing involves a financial contribution in the form of a "provision" of "goods" or otherwise, see European Communities' first written submission, paras. 841-842; United States' first written submission, paras. 317-325 and 331; European Communities' second written submission, paras. 536-548; United States' response to question 127, and the European Communities' related comments; Australia's oral statement, paras. 28-34; Canada's written submission, paras. 3-9.) In other words, we have relied upon this *arguendo* assumption to "enhance simplicity and efficiency" in our decision-making. Second, having found that the alleged subsidy is not specific under Article 2, our reliance upon this *arguendo* assumption creates no issues or difficulties from the point of view of the "implementation" of DSB recommendations and rulings. Third, the question of whether or not the allocation of patent rights constitutes a subsidy does not "go to the jurisdiction" of the Panel. Finally, the substance of our analysis under Article 2 does not depend on whether the measures at issue are properly characterized as subsidies within the meaning of Article 1.

constitute subsidies on the basis of, *inter alia*, the LERD and "limited" government rights data treatment being challenged.

7.1296 As a general rule, contractors own all technical data (i.e. data rights) produced with U.S. government funding, and may use these for their own commercial purposes. As with patents, the U.S. Government receives a royalty-free "license"[2934] to use the technical and scientific data produced with government funding in the performance of the research. A DOD publication cited by both parties in this case explains:

> "'IP deliverables' refers to the contractual obligation to deliver IP that has a predetermined content and format. The Government may own the delivered physical medium on which the IP resides, but generally it will not own the IP rights. 'License rights' refers to the Government's ability to use, reproduce, modify, and release the delivered IP. ... As a general rule under Government contracts, the contractor-developer is allowed to retain ownership of the technical data and computer software it developed; and the Government receives only a license to use that technical data and computer software. DOD does not 'own' the technical data and computer software included in deliverables, even if the Department paid for 100 percent of the development costs. The scope of the license depends on the nature of the technical data and computer software, the relative source of funding for development, and the negotiations between the parties. "[2935]

7.1297 The 1987 **Executive Order**, referred to above, appears to articulate the rationale behind the rules governing the allocation of data rights under U.S. government contracts and agreements. As noted above in the context of the discussion of patent rights, the 1983 Presidential Memorandum that extended the scope of the Bayh-Dole Act policy to encompass all U.S. government contractors, regardless of size and profit/non-profit status, was eventually incorporated into law through a 1987 Executive Order entitled "Facilitating access to science and technology". The scope of this Executive Order was not limited to patent rights. It also established a similar policy in respect of data rights. It reads in relevant part:

> "Section 1. Transfer of Federally Funded Technology.
>
> (a) The head of each Executive department and agency, to the extent permitted by law, shall encourage and facilitate collaboration among Federal laboratories, State and local governments, universities, and the private sector, particularly small business, in order to assist in the transfer of technology to the marketplace.
>
> (b) The head of each Executive department and agency shall, within overall funding allocations and to the extent permitted by law:
>
> ...

[2934] See e.g. United States' first written submission, para. 216, explaining that under its R&D contracts, NASA receives "an irrevocable paid-up license to use the data and any inventions developed under the contract"; United States' first written submission, Section VI.C, entitled "The Allocation of *License Rights* to Data Under NASA and DoD Contracts is Not a Financial Contribution, Does Not Convey a Benefit, and is Not Specific".

[2935] Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Intellectual Property: Navigating Through Commercial Waters, Issues and Solutions When Negotiating Intellectual Property With Commercial Companies, 15 October 2001 ("DOD Intellectual Property Guide"), Exhibit EC-557, pp. 1-3 and 1-4.

> (6) cooperate, under policy guidance provided by the Office of Federal Procurement Policy, with the heads of other affected departments and agencies in the development of a uniform policy permitting Federal contractors to retain rights to software, engineering drawings, and other technical data generated by Federal grants and contracts, in exchange for royalty-free use by or on behalf of the government."

7.1298 "Data rights" apply to so-called "technical data". "Technical data" means "recorded information (regardless of the form or method of the recording) of a scientific or technical nature (including computer databases and computer software documentation)".[2936]

7.1299 The provisions governing data rights are set out across different provisions of the *Federal Acquisition Regulation* and other U.S. laws, regulations, and policies.[2937] Section 52.227-14(b) ("Rights in Data—General – Allocation of Rights") of the *Federal Acquisition Regulation* states that "the Government shall have unlimited rights in— Data first produced in the performance of this contract ...", and that "{t}he Contractor shall have the right to ... Use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of this contract ...".

7.1300 Generally, any data delivered under an R&D contract funded solely by the government is "unlimited rights data". This means that the license acquired by the U.S. Government gives it "unlimited rights" to use the technical data "as it sees fit, both inside and outside of the government", i.e. to "use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so".[2938]

7.1301 Where the contractor "contributes resources"[2939] toward a project, the U.S. Government may agree to forego or curtail some of the rights that it would otherwise enjoy under its "unlimited rights" license. In this sense, under the general acquisition regulations "the source of funds" used to produce the data dictates, in the first instance, the scope of the license that the U.S. Government receives with respect to data rights. The U.S. Government may acquire "limited rights" in data that embody trade secrets or are commercial or financial and confidential or privileged, "to the extent that such data pertain to items, components or processes developed at private expense". Thus, "limited rights" data refers to data developed at "private expense", i.e. not with government funding under a contract. The government may explicitly contract for the delivery of such proprietary data, although it would acquire only "limited rights" in such data. Where the government acquires "limited rights" data, it may use the data for its own internal purposes, it may not disseminate the data outside the government without the express consent of the contractors.

7.1302 In certain NASA contracts (apparently under the ACT, HSR, AST, and R&T Base Programs), NASA used a special "limited exclusive rights data" ("LERD") clause. The clauses limited the otherwise "unlimited rights" in data that the U.S. Government would normally have in the data developed in the course of the contracted research.[2940] The LERD clauses granted U.S. companies exclusive rights to exploit critical technologies developed under certain NASA contracts for at least

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[2936] See e.g. 48 C.F.R. § 52.227-14(a) ("Rights in Data—General"), Exhibit US-103.

[2937] In its Panel Request (WT/DS353/2), the European Communities refers to "48 CFR §§ 27.400 *et seq*". In their submissions, the parties have referred to numerous other provisions of United States laws, regulations and policies concerning data rights.

[2938] United States' first written submission, para. 350.

[2939] United States' first written submission, para. 351.

[2940] European Communities' second written submission, para. 546 (agreeing with the explanation found at United States' first written submission, para. 352.)

five years from the date the data was reported. Technologies were categorized as "sensitive" and protected through LERD restrictions if they were considered to affect the competitive position of U.S. industry.[2941] The NASA contracts that contained LERD clauses involved "joint funding situation{s}", i.e. contractors were "contributing a significant amount of their own resources to contract research efforts".

7.1303 With respect to so-called "trade secret" protection, where contractors produce technical data in the performance of a contract with NASA which qualifies as trade secret information, it may be entitled to "trade secret" protection if it is the product of "cost-sharing".[2942] NASA's regulations provide that "{i}n the performance of a contract, grant, or cooperative arrangement, usually which is cost-shared[2943], the "contractor, grantee, or partner may produce technical data which qualifies as trade secret information". If such data is properly marked by its originator, NASA agrees to protect it from disclosure as long as the data remains trade secret information. In addition, the Space Act provides that if NASA employees develop information that constitutes a trade secret through joint research with a contractor, such research may be protected for a period of up to five years.[2944] A number of NASA's Space Act Agreements with Boeing (in which Boeing contributed some of its own resources to the projects) contained provisions "to maintain any data that was generated in confidence for at least 2 to 5 years".[2945]

7.1304 With respect to DOD, when valuable technical data is developed through research that is "jointly-funded" by DOD and the contractor, the U.S. Government generally "may release or disclose" the data outside the Government only for "government purposes", i.e. "government purpose rights". The U.S. Government may, however, "use, modify, release, reproduce, perform, display or disclose" such jointly-funded data "within the government without restriction". The term for these "government purpose rights" is negotiable, with five years being the baseline, subject to negotiation between the parties. DOD regulations state that "{l}onger periods should be negotiated when a five-year period does not provide sufficient time to apply the data for commercial purposes". During the term of the "government purpose rights", the U.S. Government "may not use, or authorize other persons to use, technical data marked with government purpose rights legends for commercial purposes". The contractor, however, can use this data for its own purposes during this time, or license it to others.[2946]

7.1305 In this case, the European Communities has not provided any evidence of such treatment outside of the context of the eight NASA R&D programmes and 23 DOD R&D project elements that it has challenged. This raises the question of whether the LERD and "limited" government data rights treatment accorded to Boeing under the challenged programmes can be analysed and found to constitute a separate, additional financial contribution, given the Panel's findings that the payments and access to facilities provided to Boeing under the same set of contracts and agreements constitute subsidies by virtue of, *inter alia*, the LERD and "limited" government rights data treatment being challenged.

[2941] See above, footnote 2545.

[2942] United States' first written submission, para. 343.

[2943] The European Communities reads this language as providing for trade secret protection even where there is *no* cost sharing; according to the European Communities, the words "usually which is cost shared" applies only to the third item listed, i.e. "cooperative agreements", and not to the first two items, i.e. "contract, grant". See European Communities' second written submission, para. 543.

[2944] European Communities' first written submission, paras. 835-836 (quoting Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (STI), NPR 2200.2A, 12 August 2004, Exhibit EC-587, section 4.5.7.1.2.)

[2945] See above, footnote 2545.

[2946] European Communities' first written submission, para. 819 (citing 48 C.F.R. §§ 227.7100 - 227.7103-17, Exhibit EC-590, § 227.7103-4(a)(1)). See also, United States' first written submission, para. 353.

BCI deleted, as indicated **[***]**

7.1306 The Panel has put several questions to the European Communities on this issue, in an attempt to understand how it could be that the allocation of intellectual property rights under NASA/DOD R&D contracts could constitute a separate, additional financial contribution given the fact that the European Communities has already challenged the payments made to Boeing under those same contracts and agreements. Question 28 to the European Communities reads:

> "The European Communities argues that the 'direct R&D funding' and support that Boeing allegedly received under the NASA and DOD R&D programmes at issue constitute subsidies, on the basis that Boeing 'is not required to pay anything in return' for those financial contributions. According to the European Communities, because Boeing is 'not required to pay anything in return' for this funding and support, the entirety of those financial contributions to Boeing's LCA division can be considered to confer benefits. The European Communities also claims that Boeing's acquisition/retention of rights over the intellectual property that it develops under these NASA/DOD R&D programs constitutes an additional subsidy. Does this not amount to double-counting the subsidies provided to Boeing under the NASA/DOD R&D programmes at issue?"

7.1307 The Panel sought further explanation from the European Communities. Questions 218 and 219 to the European Communities read:

> "218. At para. 103 of its Comments on EC RPQ1, the United States argues that '{f}or patents issued as a result of work done under contracts related to the eight NASA programs and 23 DOD RDT&E PEs listed in its first written submission, the EC's treatment of patent rights leads to double counting because it treats the value of the research work and the value of any patent rights that result as separate from one another when, in fact, they arise from the same transaction.' How does the European Communities respond?
>
> 219. Assume that a government and a firm enter into a contract, pursuant to which the government agrees to pay the contractor $100 to carry out certain R&D, and pursuant to which the government further agrees to waive any resulting intellectual property rights in favour of the contractor. Assume that the value of the resulting intellectual property rights is estimated to be $50. Under what circumstances could a panel conclude that there were two financial contributions, and that the total amount of the subsidy was $150?"

7.1308 The Panel also posed a question to Australia with a view to clarifying its position on this issue. Question 13 to Australia reads:

> "At para. 24 of its Oral Statement, Australia states that it agrees with the European Communities that the treatment of the fruit of the R&D under the *SCM Agreement* 'may be separate to the issue of funding' by the United States government to Boeing to conduct R&D. At para. 29 of its Oral Statement, Australia states that the treatment of intellectual property rights under a government contract 'would not necessarily constitute an additional financial contribution (over and above the government funding)'. At para. 32 of its Oral Statement, Australia argues that '{t}he financial contribution would be limited to the assistance provided by way of government funding' of R&D activities. At para. 33 of its Oral Statement, Australia states that '{i}t may be the case that the treatment of the intellectual property rights under a particular government contract could be considered an additional financial contribution'.

BCI deleted, as indicated **[***]**

> (a) Is it Australia's position that the treatment of intellectual property rights under a government R&D contract could constitute an 'additional' financial contribution 'over and above' the government funding provided to the contractor pursuant to the contract, or is it Australia's position that the financial contribution 'would be limited to the assistance provided by way of government funding'?
>
> (b) If Australia's position is that the treatment of intellectual property rights under a government R&D contract could in certain circumstances constitute an 'additional' financial contribution 'over and above' the government funding provided to the contractor, please explain what those circumstances are. For example, assume that a government and a firm enter into a contract, pursuant to which the government agrees to pay the contractor $100 to carry out certain R&D, and further agrees to waive any resulting intellectual property rights in favour of the contractor. Assume that the value of the resulting intellectual property rights is estimated to be $50. Under what circumstances could a panel conclude that there were two financial contributions, and that the total amount of the subsidy was $150?"

7.1309 As is clear from the general thrust of our questions to the European Communities and Australia, we have considerable difficulty accepting the premise that the NASA/DOD payments and access to facilities, equipment and employees provided to Boeing under R&D contracts and agreements can be treated as one financial contribution, and that Boeing's retention of certain intellectual property rights over the results of the research that it performs pursuant to those same contracts could be treated as a separate, additional financial contribution. It seems to us to be self-evident that this kind of analysis involves double-counting. Put somewhat differently, this kind of analysis involves an attempt to treat the allocation of intellectual property rights under NASA/DOD R&D contracts and agreements both as a term upon which other financial contributions (i.e. the payments and access to facilities, equipment and employees) are provided for the purpose of showing that those other financial contributions confer a benefit, and then as a separate, additional financial contribution. In order to avoid any misunderstanding, we emphasize that we are not confronted with a situation in which a government makes payments to an enterprise to perform R&D and, in addition, transfers intellectual property rights to that enterprise that have arisen out research that was performed with different funding; rather, we are dealing here with a situation in which the intellectual property at issue arises from the R&D that the enterprise receiving the funding used the government funding to perform.

7.1310 Having carefully reviewed the European Communities' and Australia's responses to our questions, we find no clear explanation of how the payments and access to facilities, equipment and employees provided to Boeing under R&D contracts and agreements could be treated as one financial contribution, and how Boeing's retention of certain intellectual property rights over the results of the research that it performs pursuant to those same contracts could be treated as a separate, additional financial contribution.

7.1311 Accordingly, we find that the European Communities has failed to demonstrate that the allocation of data rights under NASA/DOD R&D contracts and agreements constitutes a separate, additional financial contribution under Article 1.1(a)(1) of the SCM Agreement.

(f) Conclusion

7.1312 **For these reasons, the Panel finds that the European Communities has not demonstrated that the allocation of intellectual property rights under NASA/DOD R&D contracts and agreements with Boeing constitutes a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement.**

BCI deleted, as indicated **[***]**

9. NASA/DOD Independent Research & Development (IR&D) and Bid & Proposal (B&P) reimbursements

(a) Introduction

7.1313 The European Communities argues that both NASA and DOD reimburse Boeing for its own independent LCA-related R&D ("IR&D") that is not related to any specific contract, as well as for R&D undertaken by Boeing in connection with bidding on NASA/DOD R&D contracts (bid and proposal costs, or "B&P"). The European Communities argues that NASA/DOD IR&D/B&P reimbursements are subsidies within the meaning of Article 1 of the SCM Agreement, and are specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that NASA/DOD provided $5.9 billion in IR&D/B&P reimbursements to Boeing over the period 1991-2006, and argues that $3.1 billion of that total should be treated as a subsidy to Boeing's LCA division.[2947]

7.1314 The United States argues that NASA/DOD IR&D/B&P reimbursements to Boeing are not a subsidy within the meaning of Article 1 of the SCM Agreement, and are not specific within the meaning of Article 2 of the SCM Agreement. In addition, the United States argues that the European Communities has overestimated the amount of any subsidy. In this regard, the United States points out that the European Communities' estimate of the amount of the subsidy assumes that 100 per cent of the IR&D performed by Boeing and reimbursed by NASA and DOD through cost-shared R&D contracts with IDS was LCA-related.

(b) The measures at issue

7.1315 The European Communities' panel request[2948] states that NASA and DOD subsidize Boeing by "providing NASA Independent Research & Development, and Bid & Proposal Reimbursements". The European Communities' panel request indicates that NASA and DOD accord this treatment to Boeing pursuant to the following laws, regulations, and other measures (some of which are specific to NASA, some of which are specific to DOD):

- 14 CFR § 1274.204(g);
- 10 U.S.C. § 2372;
- 48 CFR § 31.205-18;
- 48 CFR § 231.205-18;
- 48 CFR §§ 9904.420 *et seq.*;
- *Department of Defense Directive Regarding IR&D, Number 3204.1* (10 May 1999);
- *DOD Appropriations Acts*

7.1316 Through the IR&D/B&P programme, as elaborated through federal statutes and regulations[2949], NASA and DOD pay aerospace and defense contractors, including Boeing, for their

[2947] NASA/DOD IR&D/B&P Subsidies to Boeing LCA Division, Exhibit EC-24, p. 1.

[2948] WT/DS353/2, items 2(c) and 3(a)(ii), pp. 8 and 10.

[2949] Independent Research and Development and Bid and Proposal Costs: Payments to Contractors, 10 U.S.C. § 2372, Exhibit EC-594; Independent Research and Development and Bid and Proposal Costs: Payments to Contractors, 10 U.S.C. § 2372 (version in effect from FY 1993-FY 1994), Exhibit EC-595; Independent Research and Development, 10 U.S.C. § 2372 (version in effect FY 1991-FY 1992), Exhibit EC-596; Independent Research and Development and Bid and Proposal Cost Federal Acquisition Rule, 48 C.F.R. § 31.205-18, Exhibit EC-597; Independent Research and Development and Bid and Proposal Cost Defense Acquisition Rule, 48 C.F.R. § 231.205-18, Exhibit EC-598.

incurred independent research and development expenditures and bid and proposal costs.[2950] IR&D expenditures consist of money spent on: (i) basic research, (ii) applied research, (iii) development, and (iv) systems and other concept formulation studies.[2951] B&P costs are defined as costs incurred in preparing, submitting, and supporting bids and proposals (whether or not solicited) on potential government or non-government contracts.[2952] These payments are made under certain government R&D contracts ("cost-based" procurement contracts), although the IR&D and B&P payments are not related to the underlying contract.[2953] Rather, these expenses are treated as reimbursements of ordinary indirect "costs" (e.g. overhead expenses). Primary control of IR&D activities rests with the contractors, who are free to determine both the amount and focus of their IR&D activities.[2954] Federal law requires that IR&D regulations "may not include provisions that would infringe on the independence of a contractor to choose which technologies to pursue in its independent research and development program".[2955] Contractors maintain rights to the intellectual property developed as a result of their independent research and development, and such rights do not include any government interest.[2956]

7.1317 The *Defense Federal Acquisition Regulation* imposes various limitations with respect to the allowability of DOD IR&D/B&P costs for major contractors like Boeing.[2957] Among other things, IR&D/B&P costs for major contractors are limited to those for projects that are of "potential interest" to DOD.[2958] By law, DOD considers that activities intended to "{s}trengthen{} the … technology base of the United States" and "{e}nhance the industrial competitiveness of the United States" to be R&D activities that are of "potential interest".[2959]

[2950] The statutory authority for this funding derives from the NASA Appropriations Acts, Exhibit EC-285, and the DOD Appropriations Acts, Exhibit EC-403.

[2951] 48 C.F.R. § 31.205-18, Exhibit EC-597, § 31.205-18(a) (defining "independent research and development (IR&D)"); Defense Contract Audit Agency Contract Audit Manual, DCAAM 7640.1, Chapter 7, 23 February 2006, Exhibit EC-599, para. 7-1501.

[2952] 48 C.F.R. § 31.205-18, Exhibit EC-597, § 31.205-18(a) (defining "bid and proposal (B&P) costs); Defense Contract Audit Agency Contract Audit Manual, DCAAM 7640.1, Chapter 7, 23 February 2006, Exhibit EC-599, para. 7-1501.

[2953] See CRA International, The United States Independent Research & Development (IR&D) and Bid & Proposal (B&P) Reimbursement Program and Its Benefits to The Boeing Company, December 2006, Exhibit EC-5, pp. 3-4, 11-13.

[2954] DOD Independent Research & Development, Program Report, May 2002, Exhibit EC-602, p. 1.

[2955] Independent Research and Development and Bid and Proposal Costs: Payments to Contractors, 10 U.S.C. § 2372, Exhibit EC-594, para. (f).

[2956] Michael E. Davey and Dahlia Stein, Congressional Research Service Report for Congress, DOD's Independent Research and Development Program: Changes and Issues, 17 December 1993, Exhibit EC-604, p. 20.

[2957] "Major contractor" means "any contractor whose covered segments allocated a total of more than $11,000,000 in IR&D/B&P costs to covered contracts during the preceding fiscal year". Independent Research and Development and Bid and Proposal Cost Defense Acquisition Rule, 48 C.F.R. § 231.205-18 (a)(iii), Exhibit EC-598. "Covered contract" in that provision means "a DOD prime contract {or subcontract} for an amount exceeding the simplified acquisition threshold, except for a fixed-price contract without cost incentives". Ibid., at (a)(i). "Covered segment" means "a product division of the contractor that allocated more than $1,100,000 in independent research and development and bid and proposal (IR&D/B&P) costs to covered contracts during the preceding fiscal year". Ibid., para. (a)(ii).

[2958] Independent Research and Development and Bid and Proposal Cost Defense Acquisition Rule, 48 C.F.R. § 231.205-18, Exhibit EC-598, para. (c)(iii).

[2959] Independent Research and Development and Bid and Proposal Costs: Payments to Contractors, 10 U.S.C. § 2372, Exhibit EC-594, at (g); Independent Research and Development and Bid and Proposal Cost Defense Acquisition Rule, 48 C.F.R. § 231.205-18, Exhibit EC-598, at (c)(iii)(B); Department of Defense Directive Regarding IR&D, Number 3204.1, 10 May 1999, Exhibit EC-600, at para. 4.1; Defense Contract

7.1318 Under the Cost Accounting Standards that govern the reimbursement of IR&D/B&P costs, which are elaborated further below, IR&D/B&P expenses must be allocated among business segments based on the beneficial or causal relationship between the IR&D cost and those segments. If a cost has a beneficial relationship to multiple business segments, it will be allocated proportionately to all. In such case, the U.S. Government only reimburses the portion of the total costs.[2960]

(c) Arguments of the European Communities

7.1319 Regarding the existence of a financial contribution, the European Communities argues in its first written submission that "IR&D and B&P reimbursements directly transfer funds from NASA and DOD to Boeing. These transfers constitute financial contributions within the meaning of Article 1.1(a)(1)(i) of the *SCM Agreement*".[2961] According to the European Communities, these reimbursements are "outright grants".[2962] In its second written submission, the European Communities attempts to rebut the United States' argument that NASA/DOD IR&D/B&P reimbursements fall outside of the scope of Article 1.1(a)(1) because they are elements of the price paid to Boeing pursuant to R&D contracts that are "purchases of services". The European Communities argues, among other things, that "'just because government contractors may account for IR&D reimbursement as "part of the purchase price of a good or service," and the US Government approves of this practice, does not mean that they are, in fact, part of the purchase price of a good or service". In the European Communities' view, IR&D/B&P reimbursements are paying Boeing for the same type of activity, regardless of whether they are "tacked onto" a contract that is purchasing goods or services.[2963]

7.1320 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that "NASA and DOD IR&D/B&P Program subsidies" confer "benefits" on Boeing's LCA division. The European Communities argues that: (i) the financial contributions "relate, at least in part, to the production of all Boeing LCA"; (ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required to pay anything in return" for this IR&D/B&P Program funding; (iv) IR&D/B&P reimbursements are "outright grants that reimburse Boeing for IR&D and B&P expenses it has already incurred related to improving, developing, and producing its entire line of LCA products", and thus essentially represent "free" money for Boeing"; and (v) it is "axiomatic that such reimbursements are not available on the market".[2964]

7.1321 In its second written submission, the European Communities responds to the United States' arguments regarding the existence of a benefit.[2965] The European Communities emphasizes that the kinds of R&D costs that may be reimbursed through IR&D/B&P include costs related to R&D projects that "enhance the industrial competitiveness of the United States" or "strengthen the technology base of the United States". According to the European Communities, it "is clear that an entity operating pursuant to market considerations would *not* agree, and would certainly *not* actively seek out, to reimburse independently-incurred costs of companies because those costs '{e}nhance the industrial competitiveness of the United States' or '{s}trengthen{} the … technology base of the United States'". The European Communities argues that this "is particularly true given the global nature of markets for technology, where the position of the United States relative to other countries

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Audit Agency Contract Audit Manual, DCAAM 7640.1, Chapter 7, 23 February 2006, Exhibit EC-599, section 7-1503.

[2960] Cost Accounting Standard 420, 48 C.F.R. § 9904.420, Exhibit US-1287, subparagraph (e).

[2961] European Communities' first written submission, para. 875.

[2962] European Communities' first written submission, para. 880.

[2963] European Communities' second written submission, paras. 589-592.

[2964] European Communities' first written submission, paras. 878-880.

[2965] European Communities' second written submission, paras. 594-614.

makes no difference to a company that can seek out technology anywhere in the world". The European Communities explains that when Boeing identifies its own suppliers, it selects them based on the technology, capabilities, and price that they offer, *not* because they are located inside or outside the United States, and *not* because purchasing goods or services from those suppliers could make them more competitive relative to other suppliers. In the European Communities' view, reimbursements of a company's internal costs on the bases that those costs "{e}nhance the industrial competitiveness of the United States" or "{s}trengthen{} the … technology base of the United States" are completely foreign to market transactions in which adequate remuneration has been negotiated.

7.1322 The European Communities also responds to the United States' argument that the applicable IR&D/B&P cost accounting requirements require Boeing and other government contractors with multiple business segments to allocate the costs of IR&D/B&P projects that are beneficial to multiple segments on a *pro rata* basis across those segments, such that the government does not reimburse the contactor for the portion allocated to its commercial segments. The European Communities argues that: (i) this does not necessarily exclude the possibility that IR&D/B&P expenses that Boeing initially considered to only have military relevance (and therefore allocated entirely to IDS contracts with DOD and NASA) could turn out to have unexpected benefits, in later years, for Boeing's LCA division; and (ii) the Panel cannot be sure that Boeing actually allocates its IR&D/B&P costs in this manner.[2966]

7.1323 The European Communities submits that NASA/DOD IR&D/B&P reimbursements are specific within the meaning of Article 2 of the SCM Agreement. The European Communities argues that IR&D/B&P reimbursements are allowed only for those enterprises in the research-based "defense and aerospace industries" that enter into contracts with NASA and DOD, and are capable of conducting specified activities: (i) basic research, (ii) applied research, (iii) development, and (iv) systems and other concept formulation studies.[2967] In addition, with respect to DOD, "major contractors" are explicitly limited to receiving IR&D/B&P reimbursements on certain projects, namely those that are "of potential interest to DOD".[2968] With respect to NASA, only entities that support NASA's mission may enter into contracts with NASA, and, consequently, be reimbursed for IR&D/B&P expenses.[2969] The European Communities argues that NASA/DOD IR&D/B&P reimbursements are also de facto specific, because in practice a wide range of government contractors are not eligible to receive NASA or DOD IR&D/B&P reimbursements. In this regard, the European Communities asserts that Boeing and a few other aerospace and defense contractors have received a predominant and disproportionate share of IR&D/B&P reimbursements.[2970] In its second written submission, the European Communities responds to the United States' rebuttal arguments on specificity by reasoning that it is not relevant if other U.S. government agencies follow the same practices regarding IR&D/B&P reimbursements. The European Communities argues that it "is simply not in dispute that the "granting authorities" at issue, with respect to the challenge of IR&D/B&P reimbursements, are NASA and DOD", and that the United States does not dispute that if a contractor does *not* receive contracts from NASA or from DOD, they will *not* receive IR&D/B&P reimbursements from NASA or DOD. The European Communities states that the "granting authority" is "not the entirety of the United States Government", thus, the extent to which other "granting authorities" within the United States follow similar, or different, practices, is irrelevant to an analysis of specificity for the subsidies provided by the granting authorities of NASA and DOD.[2971]

[2966] European Communities' second written submission, paras. 608-609.
[2967] European Communities' first written submission, para. 881.
[2968] European Communities' first written submission, para. 883.
[2969] European Communities' first written submission, para. 884.
[2970] European Communities' first written submission, paras. 886-889.
[2971] European Communities' second written submission, para. 617. See also, paras. 618-619.

BCI deleted, as indicated **[***]**

(d) Arguments of the United States

7.1324 In its first written submission, the United States argues that NASA/DOD IR&D/B&P reimbursements are not "grants". Rather, they are part of the price paid for purchases of goods or services pursuant to government contracts. To the extent that they are reimbursed through a government contract for services, such reimbursements fall outside of the scope of Article 1.1(a)(1) of the SCM Agreement because they are simply part of the price paid to Boeing pursuant to R&D procurement contracts that are "purchases of services".[2972]

7.1325 The United States argues that the European Communities has failed to demonstrate that IR&D/B&P reimbursements provide a benefit to Boeing's LCA division. The United States' principal argument, as developed in its second written submission, oral statements, and responses to questions, is that the applicable IR&D/B&P cost accounting requirements require Boeing and other government contractors with multiple business segments to allocate the costs of IR&D/B&P projects that are beneficial to multiple segments on a pro rata basis across the segments, such that the government does not reimburse the contactor for the portion allocated to its commercial segments.

7.1326 Regarding specificity, the United States argues that the IR&D and B&P regulations place no limitation on the industries or enterprises that may claim IR&D or B&P as an overhead cost allocable to cost-based contracts. The only requirements for specific reimbursement are that the company have a cost-based contract with a U.S. government agency, and that the company has in fact incurred expenses for research and development or bid and proposal activities that are not required in the performance of any other contract and that they are allocable, reasonable, and not otherwise unallowable.[2973] The United States further argues that even if IR&D and B&P reimbursements were restricted to "defense and aerospace industries", this is too broad a category of industries to be characterized as a "group of enterprises or industries" within the meaning of Article 2[2974], and that Boeing has not received a disproportionate share of IR&D/B&P reimbursements.[2975]

7.1327 In its second written submission, the United States reiterates that "the treatment of IR&D costs is not limited to particular industries, because 48 C.F.R. § 31.205-18 (which the EC recognizes as 'IR&D/B&P Federal Acquisition Rule') requires *all* government agencies to include IR&D/B&P costs in the acquisition price on cost-based contracts with *all* contractors".[2976] The United States argues that Article 2.1(a) defines an alleged subsidy as specific only if the granting authority or the legislation under which it operates "limits access to a subsidy to certain enterprises". With regard to IR&D and B&P, the "legislation pursuant to which the granting authority operates" for purposes of Article 2.1(a) is, as the European Communities acknowledges, 48 C.F.R. § 31.205-18. This provision is part of Chapter 1 of Title 48 of the Code of Federal Regulations, which sets out the Federal Acquisition Regulations ("FAR") applicable to all U.S. agencies. Thus, it applies "to all acquisitions, by all agencies, with all contractors", and does not limit access to a specific enterprise or industry or group of enterprises or industries. The United States indicates that these provisions "are the sole authority for NASA's reimbursement of IR&D and B&P costs".[2977]

[2972] United States' first written submission, para. 284.
[2973] United States' first written submission, para. 304.
[2974] United States' first written submission, paras. 306-307.
[2975] United States' first written submission, paras. 308-309.
[2976] United States' second written submission, para. 89.
[2977] United States' second written submission, para. 91.

BCI deleted, as indicated **[***]**

(e) Evaluation by the Panel

(i) The Panel's understanding of the nature of the claim of the European Communities and the scope of the measures at issue

7.1328 While the European Communities frames this claim in terms of "NASA/DOD" IR&D and B&P reimbursements, by the European Communities' estimate[2978], DOD accounts for 95 per cent of the payments to Boeing, and NASA only accounts for 5 per cent of the payments made to Boeing. Thus, the European Communities' claim appears to be predominantly about DOD IR&D/B&P reimbursements.

7.1329 The European Communities' claim appears to relate to NASA and DOD IR&D/B&P reimbursements to Boeing's military segment, i.e. IDS, through cost-based procurement contracts with IDS. Together with its first written submission, the European Communities submitted a detailed report prepared by CRA International entitled "The United States Independent Research & Development (IR&D) and Bid & Proposal (B&P) Reimbursement Program and Its Benefits to The Boeing Company".[2979] This 86-page report provides a detailed overview of the IR&D/B&P programme (including its history, governing structure, and rules and regulations), its impacts on industry, and its impact on Boeing in particular. Because there is no publicly available information on the amount of IR&D/B&P reimbursements made to individual military contractors, this report also develops and applies a methodology for estimating the value of IR&D reimbursements made to the Boeing company. Importantly, the CRA estimate, upon which the European Communities relies, is based on the assumption that

> "the entirety of Boeing's IR&D reimbursements are derived from contracts performed by Boeing's defense and space business unit, now called Integrated Defense Systems (IDS)."[2980]

7.1330 Finally, the scope of the European Communities' claim is limited to "IR&D/B&P *reimbursements with respect to* dual-use *technologies applicable to Boeing's commercial aircraft*".[2981] More specifically, the European Communities asserts that IR&D/B&P reimbursements "relate, *at least in part*, to *the production of all Boeing LCA*, and they provide Boeing's LCA division with advantages on non-market terms".[2982] The European Communities asserts that IR&D/B&P reimbursements "*reimburse Boeing for IR&D and B&P expenses* it has already incurred *related to improving, developing, and producing its entire line of LCA products*".[2983] In its second written submission, the European Communities makes clear that:

> "... the IR&D and B&P reimbursements at issue in this dispute *are limited to those that benefit the commercial aircraft division of Boeing*. The European Communities is not challenging as a subsidy the entire IR&D/B&P reimbursement system of NASA and DOD, or any IR&D and B&P reimbursements that legitimately lead to

[2978] European Communities response to question 29, para. 98.
[2979] CRA International, The United States Independent Research & Development (IR&D) and Bid & Proposal (B&P) Reimbursement Program and Its Benefits to The Boeing Company, December 2006, Exhibit EC-5.
[2980] *Ibid*., p. 31.
[2981] European Communities' first written submission, para. 871 (emphasis added); CRA International, The United States Independent Research & Development (IR&D) and Bid & Proposal (B&P) Reimbursement Program and Its Benefits to The Boeing Company, December 2006, Exhibit EC-5, p. 26.
[2982] European Communities' first written submission, para. 878 (emphasis added).
[2983] European Communities' first written submission, para. 880 (emphasis added).

> developments *exclusive to the military and space technology* and products purchased by NASA and DOD."[2984]

7.1331 Thus, it is the Panel's understanding that the measures that the European Communities is challenging are NASA and DOD reimbursements, through cost-shared procurement contracts with IDS, of IR&D/B&P expenses that "relate to the production of ... Boeing LCA", i.e. that "reimburse Boeing for IR&D and B&P expenses ... related to improving, developing, and producing its ... line of LCA products".

(ii) Whether the European Communities has established the existence of the measures it is challenging

7.1332 U.S. law requires Boeing to allocate a share of the costs of any IR&D/B&P projects benefiting both its military segment (IDS) and its commercial segment (Boeing's LCA division) to each of those segments on a "*pro rata"* basis. In the Panel's view, this fact means that the European Communities has failed to establish the existence of the measure it is challenging, namely, NASA and DOD reimbursement, through cost-shared procurement contracts with IDS, of IR&D/B&P expenses that "relate to the production of ... Boeing LCA", i.e. that "reimburse Boeing for IR&D and B&P expenses ... related to improving, developing, and producing its ... line of LCA products".

7.1333 In its 86-page report, CRA International does not say very much about the IR&D/B&P cost accounting requirements that apply to military contractors, like Boeing, that have both a military and a commercial business segment. In the context of its discussion of the rules and regulations of the IR&D/B&P programme, CRA International merely notes:

> "**3.4.4. Cost Accounting Standards (CAS)**
>
> CAS 420 provides detailed criteria and instructions for the allocation of IR&D/B&P costs to a given company's contracts. The objective of the regulation is to ensure that all allocations of IR&D/B&P costs to government contracts are conducted using a consistent and equitable method that accurately reflects the fraction of such costs borne by each business unit, and in turn, by each covered contract."[2985]

7.1334 In its first written submission, the United States explains how the IR&D/B&P cost accounting requirements operate:

> "The EC also fails to realize that even if research is properly characterized as IR&D, it will not be eligible for U.S. government reimbursement unless it is passed along to the government as part of a cost-based contract. Under the Cost Accounting Standards, IR&D expenses are allocated among business segments based on the beneficial or causal relationship between the IR&D cost and those segments. If a cost has a beneficial relationship to multiple business segments, it will be allocated proportionately to all.
>
> This principle has several implications. If IDS conducted research applicable only to civil aircraft, Boeing would not be allowed to allocate the cost to IDS's government contracts, as IDS only performs military and space business for the government. Boeing would instead be required to allocate the entire cost of the R&D to BCA.

[2984] European Communities' second written submission, para. 602 (emphasis added).

[2985] CRA International, The United States Independent Research & Development (IR&D) and Bid & Proposal (B&P) Reimbursement Program and Its Benefits to The Boeing Company, December 2006, Exhibit EC-5, p. 23.

> Because BCA has no cost-based contracts with the government, these costs would be passed along to BCA's commercial customers, and not be subject to reimbursement by the government.
>
> Second, if a military IR&D project was 'directly beneficial to Boeing's LCA operations,' as the EC mistakenly contends, Boeing would be required to allocate that cost to IDS and BCA 'on the basis of the beneficial or causal relationship between the IR&D and B&P costs and the final cost objectives.' Thus, the portion of that IR&D project related to BCA would not be allocated to IDS, and would not be subject to reimbursement in an IDS cost-based contract. The portion allocated to BCA could not be included in a cost-based contract because BCA has no such contracts. Instead, that portion of the cost would be passed along to commercial customers through BCA's overhead. Thus, 'dual-use research' included in IR&D costs will be reimbursed only to the extent of the military benefit of the research."[2986]

7.1335 In its second written submission, the United States advances this argument not in connection with the existence of a benefit to Boeing's LCA division, but rather as a threshold issue regarding the *existence of the measure being challenged*. Under the heading "The EC Has Failed to Establish That DoD or NASA IR&D or B&P Reimbursements Covered Research for Large Civil Aircraft"[2987], the United States argues that the European Communities "has provided no credible evidence that NASA or DoD actually included research related to large civil aircraft research in IR&D and B&P reimbursements".[2988] The United States again summarizes the applicable U.S. government accounting rules that govern the allocation of IR&D/B&P costs to different "segments" of government contractors (such as Boeing's LCA division and IDS within Boeing)[2989], and Boeing's own accounting rules.[2990] In responding to the European Communities' argument that R&D to "{s}trengthen the technology base of the United States" and "{e}nhance the industrial competitiveness of the United States" may be treated as an IR&D expense, the United States emphasizes that there are other types of R&D that may be reimbursed, but that:

> "... the critical point is that *to the extent such research benefitted Boeing's large civil aircraft operations, it would have to be allocated to those operations, and would not be eligible for DoD reimbursement of IR&D or B&P*. Therefore, there is no support for the EC allegation that IR&D reimbursements for projects under the "strengthen the technology base" or "industrial competitiveness" rubrics would reduce the costs of the large civil aircraft division."[2991]

7.1336 The United States concludes that:

> "... the evidence shows that U.S. law does not allow Boeing to use IR&D or B&P reimbursements to fund large civil aircraft research or to fund the share of common research that is attributable to large civil aircraft."[2992]

7.1337 In its second oral statement, the United States addresses this question in connection with the existence of a benefit, but its argument seems to again concern the very existence of the measure being challenged:

[2986] United States' first written submission, paras. 294-296.
[2987] United States' second written submission, Section V.A.
[2988] United States' second written submission, para. 78.
[2989] United States' second written submission, para. 80.
[2990] United States' second written submission, para. 81.
[2991] United States' second written submission, para. 82 (emphasis original).
[2992] United States' second written submission, para. 84.

BCI deleted, as indicated **[***]**

> "We have shown that DoD regulations actually prohibit the conduct that the EC alleges to be a subsidy. Namely, where IR&D or B&P expenses relate to both military and civil transactions, DoD will reimburse only a share of those expenses proportionate to the military transactions.
>
> The EC's IR&D expert, Mr. Keevan, agrees with this assessment. In particular, he agrees that if a known civil application exists at the time an IR&D expense for military technology is incurred, DoD regulations require allocation of a proportionate share of that expense to Boeing's civil transactions.
>
> ...
>
> ... it is clear that DoD regulations require the outcome that the EC identifies as conferring no benefit to large civil aircraft – proportionate sharing of any "dual use" IR&D between the company's civil and military operations."[2993]

7.1338 The United States has provided the Panel with the full text of the relevant cost accounting standards.[2994] The provision is included as part of the *Federal Acquisition Regulation* (FAR). Section 9904.420 ("Cost Accounting Standard 420") is entitled "Accounting for independent research and development costs and bid and proposal costs". It contains subsections on its "purpose", "definitions", "fundamental requirements", "techniques of application", and "illustrations".

7.1339 With respect to "purpose", subsection 9904.420-20 states:

> "The purpose of this Cost Accounting Standard is to provide criteria for the accumulation of independent research and development costs and bid and proposal costs and for the allocation of such costs to cost objectives based on the beneficial or causal relationship between such costs and cost objectives. Consistent application of these criteria will improve cost allocation."

7.1340 Subsection 9904.420-30 defines a number of key concepts, including "Allocate", "Bid and Proposal Cost", Business unit", "Independent Research and Development", and "Segment".

7.1341 Subsection 9904.420-40 sets forth certain "fundamental requirements", including the following:

> "(d) The IR&D and B&P cost pools of a home office shall be allocated to segments on the basis of the beneficial or causal relationship between the IR&D and B&P costs and the segments reporting to that home office.
>
> (e) The IR&D and B&P cost pools of a business unit shall be allocated to the final cost objectives of that business unit on the basis of the beneficial or causal relationship between the IR&D and B&P costs and the final cost objectives."

7.1342 Subsection 9904.420-50 explains some of the "techniques of application":

> "(e) The costs of IR&D and B&P projects accumulated at a home office shall be allocated to its segments as follows:

[2993] United States' non-confidential oral statement at the second meeting with the Panel, paras. 72-73 and 77.

[2994] 48 C.F.R. § 9904.420-40(e), Exhibit US-131; Cost Accounting Standard 420, 48 C.F.R. § 9904.420, Exhibit US-1287.

BCI deleted, as indicated **[***]**

> (1) Projects which can be identified with a specific segment(s) shall have their costs allocated to such segment(s).
>
> (2) The costs of all other IR&D and B&P projects shall be allocated among all segments by means of the same base used by the company to allocate its residual expenses in accordance with 9904.403; provided, however, where a particular segment receives significantly more or less benefit from the IR&D or B&P costs than would be reflected by the allocation of such costs to the segment by the base, the Government and the contractor may agree to a special allocation of the IR&D or B&P costs to such segment commensurate with the benefits received. The amount of a special allocation to any segment made pursuant to such an agreement shall be excluded from the IR&D and B&P cost pools to be allocated to other segments and the base data of any such segment shall be excluded from the base used to allocate these pools.
>
> (f) The costs of IR&D and B&P projects accumulated at a business unit shall be allocated to cost objectives as follows:
>
> (1) Where costs of any IR&D or B&P project benefit more than one segment of the organization, the amounts to be allocated to each segment shall be determined in accordance with paragraph (e) of this subsection."

7.1343 In addition to providing the Panel with the applicable IR&D/B&P regulations, the United States has also submitted two statements by Boeing officials on the same point.

7.1344 First, the United States has submitted an "affidavit" of David Ramey, Corporate Director of Business Operations for The Boeing Company.[2995] With regard to the IR&D/B&P accounting regulations that govern the allocation of costs in firms with multiple business segments, Mr. Ramey states:

> "1. ... I have personal knowledge of the way in which the company accounts for the activities and costs charged to the U.S. Government under its NASA and DOD contracts.
>
> 2. While both the BCA segment and the IDS segment must account for their various costs – including Independent Research and Development costs – according to general accounting standards (subject to audit by various tax and securities authorities), Boeing's IDS business segment must also comply with the U.S. Government's Cost Accounting Standards (CAS). These rules are set forth in the Federal Acquisition Regulations, which are codified in Volume 48 of the U.S. Code of Federal Regulations and further amplified in the Defense Contract Audit Agency (DCAA) Contract Audit Manual.
>
> 3. The CAS regulations require, among many other things, that IR&D expenditures be allocated to various segments (i.e. IDS and BCA) on the basis of the 'beneficial or causal relationship' to the business of the segment. In practice, Boeing operationalizes this accounting rule as follows: (1) the costs of an IR&D project identified, planned and executed by a single segment for the benefit of its own business are born fully by that segment; and (2) the costs of an IR&D project identified and planned by each segment for the benefit of both of their respective

[2995] Affidavit of David Ramey, Exhibit US-1340.

> business, and executed by {Phantom Works} on behalf of both, are accumulated in the 'enterprise-wide common pool' and allocated between the two segments according to the relative value-added base of each segment. These designations are reviewed annually, and if an IDS IR&D project is identified as having prospective value for BCA {i.e. Boeing's LCA Division}, it will be reassigned to the enterprise-wide common pool.
>
> 4. This methodology is specifically envisioned in 48 CFR § 9904.420-50 and it has been approved by DOD. Our compliance with this methodology is audited on an ongoing basis by contracting officers, contract administration officials and DCAA, and is ultimately subject to scrutiny by the DOD Inspector General. Non-compliance can result in severe penalties, including non-payment, recoupment by the government of unallowable costs, suit under the False Claims Act, and debarment from future government contracting."

7.1345 Second, the United States has submitted another "affidavit" from David C. Bullock, Vice President and CFO for Engineering, Operations and Technology at The Boeing Company.[2996] In his affidavit, Mr. Bullock states, with regard to Boeing's Phantom Works unit, that:

> "{W}here Phantom Works does Independent Research and Development (IR&D) that has applicability to multiple business operations, the costs of this R&D are allocated per U.S. government regulations among the benefiting business operations; any portion allocated to Boeing's civil aircraft operations is covered fully by the company's commercial revenues (and not reimbursed as overhead on the company's U.S. government cost-based contracts)."

7.1346 Given the apparent significance of these cost accounting requirements, the third set of questions put the following detailed question to the United States:

> "362. It is the Panel's understanding that, under U.S. government accounting rules, IR&D and B&P costs may be allocated to a 'segment' of a contractor only if the costs bear a 'beneficial and causal relationship' to that segment (US Second Written Submission, para. 80, citing 48 C.F.R. §9904-420-40 (Exhibit US-131); 48 C.F.R. § 9904.418-40(c) (Exhibit US-1141)).
>
> (a) What does 'beneficial and causal relationship' mean in this context?
>
> (b) How does Boeing determine whether IR&D and B&P costs incurred by IDS bear a 'beneficial and causal relationship' to Boeing's LCA segment?
>
> (c) The United States indicates that IR&D and B&P 'may' be allocated to Boeing's LCA segment 'only if' the costs bear a beneficial and causal relationship to that segment. Does this mean that Boeing is not required to allocate IR&D / B&P costs to its LCA segment even where there exists a 'beneficial and causal relationship'?
>
> (d) Does Boeing have a financial incentive to allocate only a small share of its IR&D / B&P costs to its LCA operations?"

7.1347 In its response to this question, the United States confirmed, among other things that "costs typically have a beneficial relationship to a segment if they advance one of the activities of that

[2996] Affidavit of David C. Bullock, Exhibit US-1284.

segment".[2997] The United States confirmed that "{d}etermining whether IR&D and B&P costs incurred by IDS bear a 'beneficial or causal relationship' to Boeing's large civil aircraft is part of Boeing's requirement to maintain an accounting system and related internal controls to ensure compliance with the Cost Accounting Standard 420".[2998] The United States further explained that:

> "Boeing's IR&D review process does not retroactively reallocate IR&D costs when one segment decides that it is interested in an IR&D project conducted by another. Sometimes this practice will allow IDS to use the results of an IR&D project funded in whole or in part by BCA, and sometimes BCA will get the advantage of an IR&D project funded in whole or in part by IDS. Given that civil technology is generally ahead of military technology in areas where there is overlap, the net flow from BCA to IDS is likely to be larger in volume than the flow from IDS to BCA."[2999]

The United States reiterated that:

> "the federal acquisition regulations permit the allocation of IR&D and B&P to a single segment, *i.e.*, IDS or BCA, if and only if the costs bear a beneficial or causal relationship only to that segment. Conversely, if IR&D and B&P costs do not bear a beneficial or causal relationship to a particular segment, the regulations prohibit allocation of any of the costs to that segment. If an IR&D project is identified with more than one specific segment of Boeing (for example, with BCA and another segment), the cost of the project must, in accordance with CAS 420-50(e)(2), be 'allocated among all segments by means of the same base used by the company to allocate its residual expenses in accordance with 9904.403...'[3000] .... once a beneficial or causal relationship exists, allocation is mandatory."[3001]

7.1348 The European Communities does not dispute that the applicable regulations require Boeing to allocate IR&D/B&P benefiting both of its segments across its military and commercial segments on a *pro rata* basis. Rather, it advances the following two arguments.

7.1349 First, the European Communities argues that this does not necessarily exclude the possibility that IR&D/B&P expenses that Boeing initially considered to only have military relevance (and therefore allocated entirely to IDS contracts with DOD and NASA) could turn out to have unexpected benefits, in later years, for Boeing's LCA division. The European Communities submits an expert statement by William T. Keevan, an expert in IR&D/B&P accounting, in support of that position.[3002] In his expert statement, Mr. Keevan, agrees with the United States that if an expected civil application exists at the time an IR&D expense for military technology is incurred, DOD regulations require allocation of a proportionate share of that expense to Boeing's civil transactions. However, Mr. Keevan explains that such allocation would not occur if civil uses are "unknown" or "unexpected" at the time the research is conducted, but "are determined in a later year to have produced information or results useful to its commercial aircraft business".[3003] However, it is only in such an "unexpected use" situation that IDS would be reimbursed by for the full cost of R&D benefiting both IDS and

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[2997] United States' response to question 362, para. 191.
[2998] United States' response to question 362, para. 192.
[2999] United States' response to question 362, para. 194.
[3000] (*footnote original*) 48 C.F.R. § 9904.420-50(e)(2), Exhibit US-131.
[3001] United States' response to question 362, para. 195.
[3002] William T. Keevan, "Independent Research & Development Reimbursements: Commentary on Selected Issues Raised by the United States' First Written Submission in DS353," November 2007, Exhibit EC-1179.
[3003] Ibid., p. 5.

Boeing's commercial segment. In our view, this "unexpected use" argument is not sufficient to establish the existence of the measure.

7.1350 Second, the European Communities argues that the Panel cannot be sure that Boeing actually allocates its IR&D/B&P costs in this manner. Specifically, the European Communities argues that:

> "... to the extent that Boeing takes a position in its own accounting procedures that is consistent with the arguments advanced in this dispute, then not only will it *not* be allocating potentially dual-use technology funded by Boeing IDS to the final cost objectives of Boeing Commercial, but it *will* be allocating potentially dual-use technology funded by Boeing Commercial to the final cost objectives of Boeing IDS."[3004]

7.1351 The "arguments advanced in this dispute" by the United States are that very little DOD R&D has actual or potential "dual use" applications, i.e. the United States argues that very little DOD R&D is LCA-related. In our view, this second argument by the European Communities does not suffice to establish the existence of the measure. It cannot be presumed that Boeing does not comply with the applicable cost accounting requirements. Moreover, even if the Panel were to assume that Boeing does not comply with the applicable cost accounting requirements, this does not change the fact that the U.S. Government has these legal requirements in place. As the panel in *US – Export Restraints* observed:

> "... the existence of a financial contribution by a *government* must be proven by reference to the action of the *government*. To determine whether a financial contribution exists under subparagraph (iv) solely by reference to the *reaction of affected entities* would mean in practice that a different standard would apply under that provision as compared to the standard under subparagraphs (i)-(iii), which involves *consideration of the action of the government* first. Similarly, we do not see how the reaction of *private entities* to a given governmental measure can be *the basis on which the Member's compliance with its treaty obligations under the WTO is established*."[3005]

7.1352 The cost accounting requirements reviewed above are the same for both IR&D costs and B&P costs.[3006] In the light of the evidence before the Panel regarding the IR&D/B&P cost accounting regulations, we conclude that the European Communities has failed to establish the existence of the measure it is challenging. More specifically, we conclude that the European Communities has failed to establish that NASA and DOD reimburse, through cost-shared procurement contracts with IDS, IR&D/B&P expenses that: "relate to the production of ... Boeing LCA", i.e. that "reimburse Boeing for IR&D and B&P expenses ... related to improving, developing, and producing its ... line of LCA products".[3007]

7.1353 For these reasons, the Panel concludes that the European Communities has not demonstrated the existence of the measure challenged.[3008]

[3004] European Communities' second written submission, para. 609.

[3005] Panel Report, *US – Export Restraints*, para. 8.34.

[3006] See e.g. European Communities' second written submission, para. 611 ("... the Cost Accounting Standards at issue here are those for "{a}ccounting for independent research and development costs and bid and proposal costs", and there is generally no distinction between cost accounting standards for IR&D and B&P").

[3007] European Communities' first written submission, paras. 871, 878, 880; European Communities' second written submission, para. 602.

[3008] In the Panel's view, the European Communities' failure to establish that NASA/DOD reimburse Boeing for IR&D/B&P expenses that "relate to the production of ... Boeing LCA" could alternatively be

BCI deleted, as indicated **[***]**

(f) Conclusion

7.1354 **For these reasons, the Panel finds that the European Communities has not demonstrated that NASA/DOD reimburse Boeing for IR&D/B&P expenses that relate to the production of Boeing LCA, and has therefore failed to establish the existence of the measures that allegedly constitute a specific subsidy under Articles 1 and 2 of the SCM Agreement.**

10. Department of Labor (DOL) 787 worker training grants

(a) Introduction

7.1355 In 2004, the Department of Labor ("DOL") awarded a $1.5 million grant to a group of entities known as the "Triad Partnership". The European Communities alleges that the purpose of the DOL grant was to cover the costs of training current and future workers for development and production of the 787, and labels it the "787 Worker Training Grant". The European Communities argues that this grant is a specific subsidy under Articles 1 and 2 of the SCM Agreement, and allocates the full amount of the grant (i.e. $1.5 million) to Boeing's LCA division.

7.1356 The United States does not deny that the DOL made the grant, or that it is a subsidy under Article 1 of the SCM Agreement. However, the United States argues that the grant is a subsidy to the Edmonds Community College, and not a subsidy to Boeing. In this regard, the United States disputes that the purpose of the grant was to train workers for the 787, and refers to it as the "Edmonds Community College Grant". In addition, the United States disputes that the subsidy is specific under Article 2 of the SCM Agreement.

(b) The measures at issue

7.1357 In 2004, the DOL awarded a $1.5 million grant to a group of entities known as the "Triad Partnership". These entities include, among others, Edmonds Community College, Everett Community College, the Snohomish Workforce Development Council, the Snohomish Economic Development Council, Boeing, and other Snohomish County aerospace manufacturing supplier industries.[3009] The money was received by, and used by, Edmonds Community College. The European Communities' panel request[3010] states that:

> "The US Department of Labor transfers economic resources to the US LCA industry on terms more favourable than available on the market or not at arm's length, through the Aerospace Industry Initiative, an element of the President's High Growth Training Initiative, under the authority of the Workforce Investment Act, Pub. L. No. 105-220 (1998), by granting to Edmonds Community College in the State of Washington funds for the training of aerospace industry workers associated with the Boeing 787."

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analysed in terms of the European Communities' failure to demonstrate that any of the alleged subsidy should be allocated to Boeing's LCA division.

[3009] United States' first written submission, para. 410.

[3010] WT/DS353/2, item 5, p. 12.

(c) Whether a subsidy exists within the meaning of Article 1 of the SCM Agreement

(i) Arguments of the European Communities

7.1358 The European Communities argues that "DOL funding to Triad and Boeing" for training 787 workers provides a direct transfer of funds and, specifically, a grant, within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement.[3011]

7.1359 Regarding the existence of a benefit within the meaning of Article 1.1(b) of the SCM Agreement, the European Communities argues that the "DOL 787 worker training grants" confer "benefits" on Boeing's LCA division. The European Communities argues that: (i) the financial contributions "relate to the production of the 787"; (ii) the financial contributions "provide Boeing's LCA division with advantages on non-market terms"; (iii) "Boeing is not required to pay anything in return for these DOL worker training grants"; and (iv) "Boeing would no doubt incur the full cost of training its 787 workers on the market".[3012]

(ii) Arguments of the United States

7.1360 The United States argues that the grant constitutes a financial contribution, but not to Boeing's 787 programme, as the European Communities contends, because it was awarded to Edmonds Community College and not to Boeing.[3013]

7.1361 The United States also argues that Boeing received no benefit from the Department of Labor grant because not only was the grant given to Edmonds Community College, rather than to Boeing, but it was not actually used to provide training to Boeing employees. In this regard, the European Communities' portrayal of the grant to Edmonds Community College as "worker training grants" that "relate explicitly to training 787 workers" is inaccurate.[3014]

(iii) Evaluation by the Panel

7.1362 Both parties agree that the challenged measure provides a subsidy within the meaning of Article 1 of the SCM Agreement. More specifically, both parties agree that the challenged measure involves a financial contribution in the form of a grant within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement, and both parties agree that this financial contribution confers a benefit within the meaning of Article 1.1(b) of the SCM Agreement. The Panel sees no reason to disagree, and notes that the funding was identified as a "grant" by the Department of Labor itself.[3015]

7.1363 In the Panel's view, the question of whether some or all of the subsidy should be allocated to Boeing's LCA division is an issue that relates to the amount of the subsidy, rather than the existence of a financial contribution or benefit within the meaning of Article 1 of the SCM Agreement.[3016] If the Panel finds that the subsidy is specific within the meaning of Article 2 of the SCM Agreement, it will address the parties' arguments and evidence on this question. However, if the Panel finds that the subsidy is not specific within the meaning of Article 2, then it need not address the question of how much of the (non-specific) subsidy should be allocated to Boeing's LCA division.

[3011] European Communities' first written submission, para. 910.
[3012] European Communities' first written submission, paras. 913-915.
[3013] United States' first written submission, para. 413.
[3014] United States' first written submission, paras. 414-416.
[3015] See e.g. Edmonds Community College Grant Notification, Exhibit EC-622, p. 1 ("The Grantee is approved for this project up to $1,475,045 as specified in the attached Statement of Work with an additional increment of $725,045").
[3016] See above, paras. 7.35-7.36 of this Report.

(d) Whether the subsidy is specific within the meaning of Article 2 of the SCM Agreement

(i) Arguments of the European Communities

7.1364 In its first written submission, the European Communities advances two arguments in support of its position that the subsidy is specific within the meaning of Article 2 of the SCM Agreement. First, the European Communities argues that the Triad Grant (which it refers to in the plural as "grants", notwithstanding that there appears to have been only one grant) is specific by virtue of the limited group of entities, including Boeing, that are part of the Triad Partnership. The European Communities explains that numerous government publications and the Notification of the Grant Award make clear that the grant to the Triad Partnership is used to train workers associated with the Boeing 787 supply chain, and the key partner in the project is the Boeing Company. For example, the Triad Partnership grant proposal states that the "primary target for this training effort is development of the workforce necessary for aerospace manufacturers in building the Boeing 7E7" including "Boeing and Boeing aerospace suppliers". In this regard, the grants are targeted at the aerospace industry, and particularly benefit Boeing, and the Statement of Work, for example, explains that the grants will be used to meet Boeing's particular needs".[3017] Second, the European Communities asserts that the "grant is also specific under Article 2.1(a) because it is a part of a larger government programme that targets only certain industries, including the aerospace industry".[3018]

7.1365 In its second written submission, the European Communities responds to the United States' arguments that the broader government programme that the Triad Grant is part of – i.e. the High Growth Job Training Initiative – is not specific. The European Communities argues that the United States misses the point that the measure at issue is the DOL's $1.5 million grant to Edmonds Community College, not the entire High Growth Job Training Initiative. According to the European Communities, the fact remains that "the grant at issue was explicitly limited to the aerospace industry (i.e. Boeing and Boeing's aerospace suppliers), and it is therefore *de jure* specific pursuant to Article 2.1(a) of the *SCM Agreement*".[3019]

(ii) Arguments of the United States

7.1366 In its first written submission, the United States advances two arguments relating to specificity. First, the United States argues that the even if the Triad Grant is analysed in isolation from the broader programme that it is part of, it "is not specific to the aerospace industry or Boeing". Rather, the beneficiaries of this grant alone could extend well beyond the aerospace industry and Boeing.[3020] Second, the United States argues that the Department of Labor grants awarded pursuant to the High Growth Job Training Initiative are not specific under Article 2.1. To begin, they are not specific within the meaning of Article 2.1(a) because they are not explicitly limited to "certain enterprises". Rather, these grants are "broadly available" across 14 diverse industry sectors that cover a significant portion of the U.S. economy, such as health care, financial services, information technology, energy, manufacturing, retail, and transportation. Within these sectors, the grants may be used for a variety of purposes across many sub-sectors. The grants are in no way *de jure* specific to either Boeing or the aerospace industry.[3021]

[3017] European Communities' first written submission, paras. 916 and 919.
[3018] European Communities' first written submission, para. 917.
[3019] European Communities' second written submission, paras. 628-629.
[3020] United States' first written submission, paras. 419-421.
[3021] United States' first written submission, para. 417.

BCI deleted, as indicated **[***]**

(iii) Evaluation by the Panel

7.1367 The European Communities argues that the Triad Grant is specific by virtue of the limited group of entities, including Boeing, that are part of the Triad Partnership. If the relevant question for the purposes of Article 2 was whether the Triad Grant would be specific if examined in isolation from the broader High Growth Job Training Initiative programme pursuant to which it was provided, the answer would surely be yes. Among other things, the "High Growth Job Training Initiative Grantee List" says that the "Target Industry" for the Triad Grant is "Aerospace".[3022] However, the grant at issue was provided pursuant to a wider programme. In this regard, we note that the European Communities panel request indicates that the grant to Edmonds Community College was made through the Aerospace Industry Initiative, "an element of the President's High Growth Training Initiative".[3023] Thus, to establish specificity, we consider that the European Communities must either advance a reasoned explanation as to why it is not appropriate to analyse specificity at the level of the broader programme, or demonstrate that the broader programme (i.e. the "High Growth Job Training Initiative") is specific. The European Communities' statement that "the measure at issue is the DOL's $1.5 million grant to Edmonds Community College, not the entire High Growth Job Training Initiative" does not suffice as a reasoned explanation for examining the Triad Grant in isolation. Thus, we turn to the question of whether the High Growth Job Training Initiative Program is specific.

7.1368 In the Panel's view, the European Communities has failed to make a prima facie case that the "High Growth Job Training Initiative" is specific under Article 2 of the SCM Agreement. While it is true that the Program "targets only certain industries, including the aerospace industry"[3024], the industries "targeted" are too broad (e.g. "advanced manufacturing" as 1 of 14 "industries") to support a finding of specificity.

7.1369 The legislative basis for the High Growth Job Training Initiative is 29 U.S.C. § 2916a. The legislation provides in relevant part:

> "(1) In general
>
> The Secretary of Labor shall use funds available under section 1356(s)(2) of title 8 to award grants to eligible entities to provide job training and related activities for workers to assist them in obtaining or upgrading employment *in industries and economic sectors identified pursuant to paragraph (4) that are projected to experience significant growth* and ensure that job training and related activities funded by such grants are coordinated with the public workforce investment system.
>
> (2) Use of funds
> (A) Training provided
> Funds under this section may be used to provide job training services and related activities that are designed to assist workers (including unemployed and employed workers) in gaining the skills and competencies needed to obtain or upgrade career ladder employment positions *in the industries and economic sectors identified pursuant to paragraph (4).*
>
> (B) Enhanced training programs and information In order to facilitate the provision of job training services described in subparagraph (A), funds under this section may be used to assist in the development and implementation of model activities such as developing appropriate curricula to build core competencies and

[3022] High Growth Job Training Initiative Grantee List, Exhibit US-171, p. 6.
[3023] WT/DS353/2, item 5, p. 12.
[3024] European Communities' first written submission, para. 917.

train workers, identifying and disseminating career and skill information, and increasing the integration of community and technical college activities with activities of businesses and the public workforce investment system to meet the training needs *for the industries and economic sectors identified pursuant to paragraph (4).*

(3) Eligible entities
Grants under this section may be awarded to partnerships of private and public sector entities, which may include—
(A) businesses or business-related nonprofit organizations, such as trade associations;
(B) education and training providers, including community colleges and other community-based organizations; and
(C) entities involved in administering the workforce investment system established under title I of the Workforce Investment Act of 1998 {29 U.S.C. 2801 et seq. }, and economic development agencies.

(4) High growth industries and economic sectors
For purposes of this section, the Secretary of Labor, in consultation with State workforce investment boards, shall identify *industries and economic sectors that are projected to experience significant growth, taking into account appropriate factors, such as the industries and sectors that--*
(A) are projected to add substantial numbers of new jobs to the economy;
(B) are being transformed by technology and innovation requiring new skill sets for workers;
(C) are new and emerging businesses that are projected to grow;
or
(D) have a significant impact on the economy overall or on the growth of other industries and economic sectors.

(5) Equitable distribution
In awarding grants under this section, the Secretary of Labor shall ensure an equitable distribution of such grants across geographically diverse areas. ..." [3025]

7.1370 The Program is administered by the Department of Labor's Employment and Training Administration (ETA). In accordance with the legislation reproduced above, the ETA identified 14 different "high growth industries and economic sectors". These include: Advanced Manufacturing, Aerospace, Automotive, Biotechnology, Construction, Energy, Financial Services, Geospatial Technology, Health Care, Homeland Security, Hospitality, Information Technology, Retail, and Transportation.[3026]

7.1371 Pursuant to the High Growth Job Training Initiative, the Department of Labor has awarded 156 grants totalling over $288 million to entities in the 14 industry sectors covered by the initiative.[3027] The recipients of these grants include state and local workforce investment systems; community colleges; health care associations and organizations; trade groups in industries such as geospatial information and technology, nanotechnology, manufacturing, automotives, and

[3025] 29 U.S.C. § 2916a, Exhibit US-1294 (emphasis added).
[3026] The President's High Growth Job Training Initiative Fact Sheet, Exhibit US-170.
[3027] High Growth Job Training Initiative Grantee List, Exhibit US-171.

construction; and state and local labour, employment, and community development agencies, among others.[3028]

7.1372 The projects funded by the grants cover various topics such as literacy, building arts, long-term care workforce challenges, hospice care, mine training, supply chain logistics, training individuals with disabilities for employment in the financial services sector, biotechnology workforce development, machine shop skills training, food and beverage manufacturing, and integrated systems technology.[3029]

7.1373 Exhibit US-171 provides the following data regarding the breakdown of grants funded under the High Growth Job Training Initiative programme:

"Target Industry"	Number of Grants
Advanced Manufacturing	31
Aerospace	7
Automotive	12
Biotechnology	17
Construction/Skilled Trades	9
Energy	11
Financial Services	5
Geospatial	6
Health Care	29
Hospitality	4
Information Technology	3
Retail	3
Transportation	4

7.1374 For these reasons, the Panel finds that the European Communities has failed to demonstrate that the subsidy is specific within the meaning of Article 2 of the SCM Agreement.

(e) Conclusion

7.1375 **For these reasons, the Panel finds that the payment that the Department of Labor made to Edmonds Community College under the High Growth Job Training Initiative is a subsidy. However, the Panel finds that the European Communities has not demonstrated that the subsidy is specific within the meaning of Article 2 of the SCM Agreement.**

11. FSC/ETI and successor act subsidies

(a) Introduction

7.1376 The European Communities argues that the "FSC/ETI and successor act Subsidies" are subsidies within the meaning of Article 1 of the SCM Agreement, and are specific within the meaning of Article 2 of the SCM Agreement. The European Communities estimates that the amount of the subsidy to Boeing's LCA division through 2006 in the form of FSC/ETI tax breaks is $2.199 billion.

7.1377 The United States accepts that the measures at issue are subsidies within the meaning of Article 1, and are specific within the meaning of Article 2. The United States also accepts the European Communities' estimate that the amount of the subsidy to Boeing's LCA division through

[3028] High Growth Job Training Initiative Grantee List, Exhibit US-171.
[3029] High Growth Job Training Initiative Grantee List, Exhibit US-171.

2006 in the form of FSC/ETI tax breaks is $2.199 billion. However, the United States disputes the European Communities' assertion that Boeing will continue to receive FSC/ETI benefits after 2006.

(b) The measures at issue

7.1378 The European Communities characterizes the measures at issue as "FSC/ETI and successor act subsidies". In its description of these measures, the European Communities discusses the original provisions of the U.S. Internal Revenue Code relating to foreign sales corporations, the *FSC Repeal and Extraterritorial Income Exclusion Act of 2000*, the *American Jobs Creation Act of 2004* and the *Tax Increase Prevention and Reconciliation Act of 2005*.[3030, 3031]

(i) Provisions of the U.S. Internal Revenue Code relating to foreign sales corporations[3032]

7.1379 A Foreign Sales Corporation ("FSC") was a corporation created, organised, and maintained in a qualified foreign country or U.S. possession outside the customs territory of the United States under the specific requirements of Sections 921-927 of the U.S. Internal Revenue Code.[3033] A FSC obtained a U.S. tax exemption on a portion of its "foreign trade income", which meant the gross income of a FSC attributable to "foreign trading gross receipts". Foreign trading gross receipts meant the gross receipts of any FSC that were generated by qualifying transactions, which generally involved the sale or lease of "export property".[3034] A portion of the "foreign trade income" was deemed to be "foreign source income not effectively connected with a trade or business in the United States" and was therefore not taxed in the United States. This untaxed portion was referred to as the "exempt foreign

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[3030] European Communities' first written submission, paras. 923-945.

[3031] In its request for establishment of a panel in this dispute, the European Communities submits that:

> "The US Government transfers economic resources to the US LCA industry through the federal tax system, and in particular through the following tax measures:
>
> a. Sections 921-927 of the Internal Revenue Code (prior to repeal) and related measures establishing special tax treatment for "Foreign Sales Corporations" ("FSCs");
>
> b. FSC Repeal and Extraterritorial Income Exclusion Act of 2000, Pub. L. No. 106-519; and
>
> c. American Jobs Creation Act of 2004, Pub. L. No. 108-357."

Request for the Establishment of a Panel by the European Communities, WT/DS353/2, p. 12 (23 January 2006).

[3032] The European Communities submits that "the primary legal provisions constituting the FSC measure are sections 245(c), 921 through 927, and 951(e) of the United States Internal Revenue Code". European Communities' first written submission, para. 923, footnote 1615. A detailed description of the FSC provisions is contained in Panel Report, *US – FSC*, paras. 2.1-2.8, 7.95-7.97 and Appellate Body Report, *US – FSC*, paras. 11-18.

[3033] Exhibit EC-623. A FSC had to meet certain requirements of foreign presence. For example, a FSC had to maintain an office outside the customs territory of the United States, which office had to be equipped to transact the FSC's business. Also, in order for a FSC, other than a small FSC, to be treated as having foreign trading gross receipts for the taxable year, the management of the corporation during the taxable year had to take place outside the United States, and the corporation could have foreign trading gross receipts from any transaction only if economic processes with respect to the transaction took place outside the United States.

[3034] With certain exceptions, export property was:

- property held for sale or lease;
- manufactured, produced, grown, or extracted in the United States;
- by a person other than a FSC;
- sold, leased, or rented for use, consumption, or disposition outside the United States; and
- with no more than 50 per cent of its fair market value attributable to imports.

trade income". The remaining portion was taxable to the FSC. Dividends paid by the FSC out of exempt and non-exempt income to the shareholder (ordinarily, the "related supplier") generally qualified for a full dividends-received deduction. In addition to the exemption from income taxation of a portion of the FSCs foreign trade income, the FSC measure also allowed U.S. parents of FSCs to defer paying taxes on certain "foreign trade income" that would normally be subject to immediate taxation and to avoid paying taxes on dividends received from their FSCs related to "foreign trade income".

(ii) FSC Repeal and Extraterritorial Income Exclusion Act of 2000[3035]

7.1380 On 15 November 2000, the United States enacted the *FSC Repeal and Extraterritorial Exclusion Act of 2000* ("ETI Act") in response to the findings made with respect to the FSC provisions by the panel and the Appellate Body in *US – FSC*.[3036] The ETI Act (i) repealed the provisions in the U.S. Internal Revenue Code relating to taxation of FSCs, subject to certain transition and grandfather provisions and (ii) introduced an exclusion from income taxation of "extraterritorial income".

7.1381 First, the ETI Act specified that, in general, the amendments made by the Act "shall apply to transactions after September 30, 2000". In addition, no new FSCs could be created after that date. However, in the case of a FSC in existence on 30 September 2000, Section 5(c) (1) of the ETI Act provided that the amendments made by the Act did not apply to any transaction in the ordinary course of trade or business involving a FSC which occurred: (i) before 1 January 2002; or (ii) after 31 December 2001, pursuant to a binding contract between the FSC (or any related person) and any unrelated person that was in effect on 30 September 2000.

7.1382 Second, the ETI Act allowed for the exclusion from taxation of certain income of a U.S. "taxpayer". Such income -- "extraterritorial income" that was "qualifying foreign trade income" – could be earned with respect to goods only in transactions involving qualifying foreign trade property. The ETI Act defined "extraterritorial income" as the gross income of a taxpayer attributable to "foreign trading gross receipts", i.e. gross receipts generated by certain qualifying transactions involving the sale or lease of "qualifying foreign trade property" not for use in the United States. "Qualifying foreign trade income" under the ETI Act meant, with respect to any transaction, the amount of gross income which, if excluded, would result in a reduction of the taxable income of the taxpayer from such transaction equal to the greatest of: (i) 30 per cent of the foreign sale and leasing income derived by the taxpayer from such transaction; (ii) 1.2 per cent of the foreign trading gross receipts derived by the taxpayer from the transaction, or (iii) 15 per cent of the foreign trade income derived by the taxpayer from the transaction. "Qualifying foreign trade property" meant property: "(A) manufactured, produced, grown or extracted within or outside the United States ; (B) held primarily for sale, lease or rental, in the ordinary course of trade or business for direct use, consumption, or disposition outside the United States; and (C) not more than 50 per cent of the fair market value of which was attributable to: (i) articles manufactured, produced, grown, or extracted outside the United States; and (ii) direct costs for labour (determined under the principles of Section 263A) performed outside the United States".

7.1383 The ETI Act's definitions of qualifying foreign trade property and foreign trading gross receipts -- which determined income that qualified as extraterritorial income, foreign trade income and qualifying foreign trade income -- thus contained at least two requirements that had to be satisfied

[3035] FSC Repeal and Extraterritorial Income Exclusion Act of 2000, United States Public Law 106-519, 114 Stat. 2423 (2000). Exhibit EC-625. A detailed description of the provisions of this Act is contained in Panel Report, *US – FSC (Article 21.5 – EC)*, paras. 2.1-2.8 and Appellate Body Report, *US – FSC (Article 21.5 – EC)*, paras. 12-14.

[3036] Panel Report, *US – FSC*, para. 8.1(a); Appellate Body Report, *US – FSC*, paras. 177(a) and 178.

in order for a taxpayer to qualify for the exclusion from taxation: (i) a requirement that a good produced within or outside the United States be held primarily for sale, lease or rental, in the ordinary course of trade or business for direct use, consumption, or disposition outside the United States; and (ii) a requirement that no more than 50 per cent of the fair market value of such property be attributable to articles manufactured, produced, grown, or extracted outside the United States, and direct costs for labour performed outside the United States.

(iii) American Jobs Creation Act of 2004[3037]

7.1384 On 22 October 2004, the United States enacted the *American Jobs Creation Act of 2004 ("*AJCA") in response to the findings made by the Panel and the Appellate Body in *US – FSC (Article 21.5 – EC)*.[3038] Section 101 of the AJCA ("Repeal of exclusion for extraterritorial income") repealed the provisions in Section 114 of the Internal Revenue Code relating to the exclusion from income taxation of extraterritorial income. The effective date of this repeal was 31 December 2004. However, a "transitional rule for 2005 and 2006" in Section 101(d) of the AJCA allowed U.S. taxpayers to claim 80 per cent of ETI tax benefits with respect to certain transactions in 2005 and to claim 60 per cent of ETI tax benefits with respect to certain transactions in 2006. In addition to this time-limited transitional rule, the AJCA indefinitely grandfathered the ETI scheme in respect of certain transactions. Specifically, Section 101(f) ("Binding Contracts") of the AJCA provided that Section 101 of the AJCA did not apply to any transaction in the ordinary course of a trade or business which occurred pursuant to a binding contract (i) which was between the taxpayer and an unrelated person and (ii) which was in effect on September 17, 2003, and at all times thereafter. Moreover, Section 101 of the AJCA did not repeal Section 5(c)(1) of the ETI Act, which indefinitely grandfathered FSC subsidies in respect of certain transactions entered into pursuant to binding contracts in effect on 30 September 2000.[3039]

(iv) Tax Increase Prevention and Reconciliation Act of 2005[3040]

7.1385 On 17 May 2006, the United States enacted the *Tax Increase Prevention and Reconciliation Act of 2005* ("TIPRA") in response to the findings of the Panel and the Appellate Body in *US – FSC (Article 21.5 – EC II)*.[3041] Section 513 of the TIPRA is entitled "Repeal of FSC/ETI Binding Contract Relief". Section 513(a) of the TIPRA ("FSC Provisions") repeals the provision in Section 5(c)(1)(B) of the ETI Act that allowed for the continuation of FSC benefits in respect of transactions occurring pursuant to a binding contract in effect on 30 September 2000. Section 513(b) of the TIPRA ("ETI Provisions") repeals the provisions in Section 101(f) of the AJCA that allowed for the continuation of ETI tax benefits in respect of transactions occurring pursuant to a binding contract in effect on 17 September 2003. Section 513(c) of the TIPRA provides that "{t}he amendments made by this section shall apply to taxable years beginning after the date of the enactment of this Act".

[3037] American Jobs Creation Act of 2004, Pub. L. No. 108-357, §101. Exhibit EC-626. The provisions of the AJCA are described in greater detail in Panel Report, *US – FSC (Article 21.5 – EC II)*, paras. 2.13-2.17.

[3038] Panel Report, *US – FSC (Article 21.5 – EC)*,paras. 9.1(a), 9.1(b), 9.1(e); Appellate Body Report, *US – FSC (Article 21.5 – EC)*,paras. 256(b), 256 (f), 257.

[3039] Above, para. 7.1381.

[3040] Tax Increase Prevention and Reconciliation Act of 2005, Pub. L. No. 109-222, § 513, Exhibit EC 627.

[3041] Panel Report, *US – FSC (Article 21.5 – EC II)*, para. 8.1; Appellate Body Report, *US – FSC (Article 21.5 – EC II)*, para. 100(b).

(c) Whether a specific subsidy exists within the meaning of Articles 1 and 2 of the SCM Agreement

(i) Arguments of the European Communities

7.1386 The European Communities argues that "{t}he US Government provides financial contributions to those companies eligible for the FSC/ETI tax regime, including through the associated transitional and grandfather provisions in successor legislation" and that these financial contributions are covered by Article 1.1(a)(1)(ii) ("government revenue that is otherwise due is foregone or not collected") of the SCM Agreement.[3042]

7.1387 The European Communities submits, in this respect, that the FSC measure provides for three tax exemptions that operate together to shield income from taxation that would otherwise be taxed in the absence of the FSC measure. First, it exempts FSCs from paying taxes on a portion of their foreign trade income. Second, the FSC measure allows U.S. parents of FSCs to defer paying taxes on certain foreign trade income. Third, the FSC measure allows U.S. parents of FSCs to avoid paying taxes on dividends received from their FSCs related to "foreign trade income". Thus, these three exemptions, taken together, involve the foregoing of revenue that is otherwise due because absent the FSC measure, the tax liability of FSCs and their U.S. parents would be higher.[3043]

7.1388 The European Communities submits that the exclusion of "qualifying foreign trade income" from taxation under the ETI measure similarly shields certain income of U.S. taxpayers from taxation. Under the ETI measure only "qualifying foreign trade income" of a U.S. taxpayer is non-taxable. Such "qualifying foreign trade income" is determined on the basis of highly selective qualitative and quantitative requirements such as the "use outside the United States" requirements and the "foreign articles/labour limitation". In the absence of the ETI measure, U.S. taxpayers would be required to include in their income, and hence pay taxes on, such "qualifying foreign trade income". The ETI measure therefore results in the foregoing of revenue that is otherwise due because absent the ETI measure the tax liability of US corporations would be higher.[3044]

7.1389 The European Communities argues that the ETI Act and the AJCA maintain the FSC and ETI subsidies with respect to transactions based on certain pre-existing binding contracts and that the TIPRA did not completely terminate this flow of subsidies. Thus, the transitional and grandfather provisions of the ETI Act and the AJCA continue to provide financial contributions within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement based on the original FSC and ETI measures.[3045]

7.1390 The European Communities argues that the FSC/ETI tax breaks, including their continuation through transitional and grandfather provisions, confer benefits on Boeing's LCA division within the meaning of Article 1.1(b) of the SCM Agreement. The tax breaks relate to the production of Boeing LCA and provide Boeing's LCA division with advantages on non-market terms. Since Boeing is not required to pay anything in return for these FSC/ETI tax breaks, the entirety of the financial contributions to Boeing's LCA division can be considered to confer benefits.[3046]

7.1391 The European Communities argues that the FSC and ETI measures, including their continuation through successor legislation, are deemed to be specific within the meaning of

[3042] European Communities' first written submission, para. 952.
[3043] European Communities' first written submission, para. 953.
[3044] European Communities' first written submission, para. 954.
[3045] European Communities' first written submission, para. 956.
[3046] European Communities' first written submission, para. 959.

BCI deleted, as indicated **[***]**

Article 2.3 of the SCM Agreement because these measures are prohibited subsidies contingent in law upon export performance within the meaning of Article 3.1(a) of the SCM Agreement.[3047]

(ii) Arguments of the United States

7.1392 The United States "does not dispute that FSC/ETI benefits are a financial contribution that confers a benefit and is specific".[3048]

(iii) Evaluation by the Panel

7.1393 Before proceeding to an evaluation of whether the measures at issue are specific subsidies, the Panel finds it useful to set out its understanding of the nature of the claims made by the European Communities[3049] and of the scope of the measures challenged by the European Communities.

7.1394 First, as to the nature of the claims advanced by the European Communities, the Panel notes that these claims concern the FSC/ETI subsidies as used by a particular entity, Boeing. The European Communities asserts that "{t}hrough the US federal government's foreign sales corporations ('FSC') and extraterritorial income ('ETI') tax exemptions and exclusions, *Boeing has received over $2 billion in specific subsidies*".[3050] The European Communities also alleges that the FSC and ETI tax breaks confer benefits within the meaning of Article 1.1(b) of the SCM Agreement *on Boeing's LCA division*. In response to a panel question, the European Communities explains that "its challenge to the continuing FSC/ETI scheme does not aim at requiring the United States to withdraw all continuing effects of the scheme generally, but only *the benefit accruing to Boeing/McDonnell Douglas and the adverse effects caused thereby*".[3051] Thus, the claims of the European Communities pertain to FSC and ETI tax exemptions and exclusions specifically in relation to Boeing.[3052]

7.1395 Second, as to the scope of the challenged measures, the Panel notes that the European Communities, in its legal analysis of why these measures constitute subsidies, refers to the measures as "the FSC/ETI tax regime, including ... the associated transitional and grandfather provisions in successor legislation"[3053], "FSC/ETI tax breaks, including their continuation through transitional and grandfather provisions"[3054] and "FSC and ETI measures, including their continuation through successor legislation".[3055] As noted above, in describing the factual background to its claims, the European Communities summarizes the provisions of the U.S. Internal Revenue Code relating to foreign sales corporations, the ETI Act, the AJCA and the TIPRA. We find the following statements of the European Communities particularly instructive to understand how the European Communities' legal claim relates to each of these different measures.

7.1396 In its first written submission, the European Communities states that:

> "the ETI Act and the AJCA maintain these FSC and ETI subsidies with respect to transactions based on certain pre-existing long term binding contracts, and the flow of these subsidies was not completely terminated pursuant to the TIPRA. In so doing,

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[3047] European Communities' first written submission, para. 962.
[3048] United States' first written submission, para. 422.
[3049] The European Communities makes claims with respect to the FSC/ETI and succesor act subsidies under Article 3 of the SCM Agreement, on the one hand, and Articles 5 and 6, on the other.
[3050] European Communities' first written submission, para. 921 (emphasis added).
[3051] European Communities' response to question 59, para. 207 (emphasis added).
[3052] See also above, para. 7.150.
[3053] European Communities' first written submission, para. 952.
[3054] European Communities' first written submission, para. 959.
[3055] European Communities' first written submission, para. 962.

> the transitional and grandfather provisions of the ETI Act and the AJCA continue to provide financial contributions based on the original FSC and ETI measures within the meaning of Article 1.1(a)(1)(ii) of the *SCM Agreement*".[3056]

7.1397 In its second written submission, the European Communities refers to "the Foreign Sales Corporation ('FSC') and extraterritorial income ('ETI') tax breaks, as maintained through the FSC Repeal and Extraterritorial Income Exclusion Act of 2000 ('ETI Act'), American Jobs Creation Act of 2004 ('AJCA'), and Tax Increase Prevention and Reconciliation Act of 2005 ('TIPRA')".[3057]

7.1398 In its statement at the second meeting of the Panel, the European Communities explains that it "is not challenging 'TIPRA' as a separate measure, and it has no interest in doing so given that TIPRA actually repeals certain aspects of FSC/ETI. Rather, it is challenging the FSC/ETI measures listed in the Panel Request, to the extent that they provided and, despite TIPRA, continue to provide subsidies to Boeing."[3058]

7.1399 In sum, it is our understanding that: (i) the claims of the European Communities pertain to, on the one hand, the tax advantages allegedly enjoyed by Boeing under the original legislation relating to the treatment of foreign sales corporations and the ETI Act and, on the other, the continuation of those tax advantages under the transition and grandfather provisions contained in the ETI Act and the AJCA; and (ii) the European Communities relies on the TIPRA as evidence that the subsidies provided under the "binding contracts" grandfather provisions of the ETI Act and the AJCA have not been completely repealed.

7.1400 It is not in dispute that during the period 1989-2006 Boeing received tax exemptions and exclusions under the FSC and ETI legislation, including under transition and grandfather provisions of successor legislation. The Panel notes that the parties agree that these tax exemptions and tax exclusions provided to Boeing are financial contributions within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement that confer a benefit within the meaning of Article 1.1(b) and are specific within the meaning of Article 2 of the SCM Agreement.

7.1401 With respect to the existence of a subsidy under Article 1, the Panel also notes the findings made in this regard by the panels and the Appellate Body in *US – FSC, US – FSC (Article 21.5 – EC)* and *US – FSC (Article 21.5 – EC – II).*

7.1402 First, the panel in *US – FSC* made findings regarding Sections 921-927 of the Internal Revenue Code and related measures establishing special tax treatment for FSCs.[3059] The panel found that certain "exemptions identified by the European Communities under the FSC scheme" were financial contributions under Article 1.1(a)(1)(ii) of the SCM Agreement because they involved the foregoing of revenue which was otherwise due[3060] and conferred a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[3061] The Appellate Body upheld the panel 's findings that the FSC exemptions were financial contributions within the meaning of Article 1.1(a)(1)(ii).

7.1403 Second, the panel in *US – FSC (Article 21.5 – EC)* made findings with respect to the ETI Act. The panel found that the ETI Act's exclusion from gross income of certain "extraterritorial income"

[3056] European Communities' first written submission, para. 955 (emphasis original).
[3057] European Communities, second written submission, para. 631.
[3058] European Communities, non-confidential statement at second meeting of the Panel with the parties, para. 78. Thus, rather than making a *claim* in respect of the TIPRA, it appears that the European Communities discusses this measure only for the purpose of pre-empting an argument that the measures at issue have been repealed.
[3059] Panel Report, *US – FSC*, para. 11.
[3060] Panel Report, *US – FSC*, para. 7.102.
[3061] Panel Report, *US – FSC*, para. 7.103.

gave rise to a financial contribution in the form of a foregoing of government revenue that was otherwise due within the meaning of Article 1.1(a)(1)(ii)[3062] and that this financial contribution conferred a benefit, such that a subsidy within the meaning of Article 1.1 existed.[3063] The Appellate Body upheld the panel's findings that the ETI measure involved a financial contribution through the foregoing of government revenue otherwise due[3064]

7.1404 Third, in *US – FSC (Article 21.5 – EC – II)*, the panel found that the United States, by enacting Section 101 of the AJCA, maintained the prohibited FSC and ETI subsidies through transition and grandfather clauses in section 101 of the AJCA.[3065] The Appellate Body upheld this finding.[3066]

7.1405 Regarding specificity, we further note that, in addition to the agreement of the parties on this issue, Article 2.3 of the SCM Agreement provides that subsidies that are contingent upon export performance within the meaning of Article 3 of the SCM Agreement shall be deemed to be specific. In *US – FSC, US – FSC (Article 21.5 – EC)* and *US – FSC (Article 21.5 – EC II)*, the FSC/ETI subsidies at issue were found to be export contingent. In addition, this Panel finds further below[3067] that the measures at issue are export contingent. Accordingly, we conclude here that they are specific within the meaning of Article 2 of the SCM Agreement.

7.1406 For these reasons, the Panel finds that tax exemptions and tax exclusions provided to Boeing under the FSC and ETI legislation, including the transition and grandfather provisions of the ETI Act and the AJCA, constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement.

(d) Amount of the subsidy to Boeing's LCA division

(i) Arguments of the European Communities

7.1407 The European Communities estimates that the amount of the subsidy to Boeing's LCA division through 2006 in the form of FSC/ETI tax breaks is $2.199 billion.[3068]

7.1408 The European Communities argues that the TIPRA[3069] repeals certain aspects of the grandfathering of FSC and ETI tax breaks for tax years beginning after 2006 but does not end the flow of all FSC/ETI benefits after 2006. The European Communities asserts, in the light of a memorandum from the Internal Revenue Service's Office of Chief Counsel[3070], that Boeing will continue to benefit from the FSC/ETI benefits. Specifically, Boeing will continue to receive certain FSC/ETI benefits to the extent that Boeing recognizes revenue after 2006 that (i) is derived from a firm order or option exercised prior to the end of 2006, where (ii) such order or exercised option was made pursuant to a binding contract that qualifies under either the "FSC binding contract rule" of the

[3062] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.43.
[3063] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.48.
[3064] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, para. 106.
[3065] Panel Report, *US – FSC (Article 21.5 – EC II)*, para. 7.65.
[3066] Appellate Body Report, *US – FSC (Article 21.5 – EC II)*, para. 96.
[3067] See below, paras. 7.1450-7.1464.
[3068] European Communities' first written submission, para. 957; International Trade Resources LLC, FSC/ETI Tax Benefits Provided to U.S. Large Civil Aircraft Producers, Exhibit EC-12. The European Communities asks the Panel to adopts this estimate as the best information available and, as appropriate, draw adverse inferences due to the United States' non-cooperation in the information gathering process. European Communities' first written submission, para. 958.
[3069] See above, para. 7.1385.
[3070] Office of Chief Counsel, Qualification for FSC Benefits and ETI Exclusions, Internal Revenue Service Memorandum Number AM 2007.001, 22 December 2006, Exhibit EC-628, p.6.

ETI Act or the "ETI binding contract rule" of the AJCA.[3071] While the financial contributions from the FSC/ETI measures continue to apply after 2006, the European Communities has been unable to provide an estimate of the future value of those subsidies to Boeing's LCA division.[3072]

7.1409 The European Communities submits that there is no support for the argument of the United States that Boeing will not take advantage of the FSC/ETI subsidies after 2006. The statement in Boeing's 2006 annual report relied upon by the United States[3073], is not dispositive of what Boeing may or may not do as of 1 January 2007 with regard to the FSC/ETI breaks. First, the statement that "2006 will be the final year for recognizing any export tax benefits" is based on the text of the TIPRA and does not take into account the implications of the December 2006 Internal Revenue Service memorandum which interpreted the TIPRA as repealing the FSC/ETI binding contract rules only prospectively. Second, the auditors report and the CEO/CFO certifications are limited to "material" facts or to "the circumstances under which such statements were made". In other words, the statements made in the annual report do not necessarily reflect the full implications of the December 2006 Internal Revenue Service memorandum, as those implications may not have been entirely known or understood at the time Boeing issued its annual report. The European Communities notes that the United States has not submitted a certified and enforceable statement from a Boeing official stating that regardless of the interpretation issued by the Internal Revenue Service in its December 2006 memorandum, Boeing will disclaim all FSC/ETI tax breaks after 2006.[3074] The European Communities argues that given how easy it would be for someone at Boeing to author a one or two paragraph affidavit to defend the United States' position on post-2006 FSC/ETI tax benefits to Boeing – something that Boeing has done to defend other claims on a number of other occasions – the fact that Boeing and the United States have not submitted such an affidavit must be taken into account by the Panel when evaluating the European Communities' claims.[3075]

7.1410 In response to a Panel question, the European Communities stresses that it includes within the scope of this dispute the financial contributions and benefits that Boeing continues to receive after 2006. The statement in paragraph 957 of its first written submission that "the financial contributions from FSC/ETI continue to apply after 2006, although the European Communities has been unable to provide an estimate of the future value of those subsidies to Boeing's LCA Division" indicates simply that the European Communities does not have sufficient information to value the FSC/ETI benefits to Boeing after 2006. Thus, it is indeed necessary for the Panel to reach a conclusion on whether Boeing will continue to receive financial contributions and benefits under the FSC/ETI-related measures after 2006.[3076]

7.1411 Regarding the statement by Boeing, submitted by the United States in its response to a panel question, that Boeing "did not receive any benefits from FSC or successor legislation after 31 December 2006", the European Communities asserts that this statement does not indicate that Boeing does not plan to recognise benefits from FSC or successor legislation in its tax filings after 20 July 2009, the date of the signed statement. The European Communities recalls in this regard that it is clear from the Internal Revenue Service memorandum of 22 December 2006 that Boeing may continue to receive certain FSC/ETI benefits after 2006. Because the type of revenue in respect of which Boeing can continue to receive the FSC/ETI benefits can be recognised after 20 July 2009, the benefits from FSC and successor measures can likewise be realised after that date. The United States and Boeing have not presented any evidence to rebut this understanding. The European Communities also points out that the United States' response to this question has no impact on the amount of the

[3071] European Communities' first written submission, para. 945.
[3072] European Communities' first written submission, para. 957.
[3073] See below, para. 7.1423.
[3074] European Communities' second written submission, paras. 635-637.
[3075] European Communities' comments on United States' response to question 226, paras. 282-284.
[3076] European Communities' response to panel question no. 30, paras. 99-100.

FSC/ETI subsidies at issue, as the European Communities has never attempted to provide an estimate of the future value of those subsidies to Boeing's LCA division.[3077]

(ii) Arguments of the United States

7.1412 The United States does not dispute the European Communities' estimate of FSC/ETI benefits related to large civil aircraft during the period 1989-2006.[3078]

7.1413 The United States rejects the contention of the European Communities that Boeing will continue to receive certain FSC/ETI benefits after 2006. In this connection, the United States refers to a statement in Boeing's 2006 annual report.[3079] Since the European Communities has presented no reason to disbelieve this certified statement by Boeing's officers the Panel should conclude that Boeing ceased receiving FSC/ETI benefits as of 31 December 2006. Accordingly, with regard to any claims of threat of serious prejudice, FSC/ETI benefits should not enter into the analysis.[3080]

7.1414 The United States argues that the European Communities does not contest that Boeing has stated that it will not use the FSC/ETI subsidy after the 2006 tax year. Instead, the European Communities focuses on a memorandum issued by an Associate Chief Counsel of the Internal Revenue Service with regard to the eligibility for FSC/ETI benefits in some circumstances. As evidence, that general evaluation should not supersede the conclusion reached by Boeing with regard to its specific tax situation that it will not use that subsidy in the future. In addition, the European Communities has ignored a statement at the beginning of the memorandum, saying "This advice may not be used or cited as precedent".[3081]

7.1415 The United States considers that, in the light of the fact that the European Communities excludes any FSC/ETI benefits that Boeing will receive after 2006 from its calculations and in the light of Boeing's statement that it will not receive such benefits after 2006, there is no need for the Panel to make a finding as to whether Boeing will continue to receive such benefits after 2006.[3082] In response to the argument of the European Communities that the Panel should apply adverse inference to estimate the value of FSC/ETI benefits after 2006 in the light of "the US non-cooperation with Annex V and otherwise", the United States asserts that it has submitted all of the information on this topic available to it namely the statement in Boeing's 2006 annual report that it will not receive FSC/ETI benefits after the 2006 tax year. No party can submit unavailable evidence and the absence of that evidence supports only the conclusion that the party has cooperated to the best of its ability.[3083]

7.1416 The United States submits that there are many forms of evidence in addition to affidavits. The United States in this instance has chosen to rely on a statement in Boeing's financial report stating that it will not take advantage of FSC/ETI benefits after 2006. The European Communities has provided no evidence to the contrary. Its only rebuttal is to assert that Boeing would be eligible for that subsidy. However, eligibility and actual use are two very different concepts. Even if the European Communities had proven that Boeing would qualify for FSC/ETI benefits on the basis of

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[3077] European Communities' comments on United States' response panel question 369, paras. 202-206.

[3078] United States' first written submission, para. 422. The United States observes that it does "not agree with all aspects of the EC calculation, but the EC's estimate is sufficient for purposes of Article 6, given that the general magnitude of a subsidy, and not its precise percentage incidence, is the focus of the analysis under that article". United States' first written submission, para, 422, footnote 576.

[3079] United States' first written submission, para. 423; Boeing Annual Report (2006), Exhibit US-126, p. 55.

[3080] United States' first written submission, para. 425.

[3081] United States' non-confidential statement at first meeting of the Panel with the parties, para. 25.

[3082] United States' response to question 30, para. 79.

[3083] United States' comments on European Communities' response to question 30, para. 112.

the Internal Revenue Service memorandum, that would not constitute evidence that the company actually will use those benefits.

7.1417 In response to a Panel question whether Boeing received any FSC benefits after 31 December 2006, the United States indicates: "No, Boeing did not receive any FSC benefits after December 31, 2006"[3084] In support of this answer, the United States submits a statement by Boeing's Vice-Director for Tax.[3085]

(iii) Evaluation by the Panel

7.1418 The European Communities estimates that the amount of the FSC/ETI subsidies to Boeing's LCA division during the period 1989-2006 is $2.199 billion. The European Communities has provided a detailed explanation of the methodology used in deriving this figure.[3086] The United States has indicated that it does not dispute the estimate by the European Communities of FSC/ETI benefits related to large civil aircraft during the period 1989-2006.

7.1419 In the light of the explanation provided by the European Communities of the methodology used for deriving its estimate of the amount of FSC/ETI subsidies to Boeing during the period 1989-2006 and the statement of the United States that it does not dispute the European Communities' estimate, the Panel estimates that the amount of FSC/ETI subsidies to Boeing's LCA division in the period 1989-2006 is $2.199 billion.

7.1420 While there is no disagreement between the parties on the characterization of the FSC/ETI tax advantages provided to Boeing through 2006 as specific subsidies and on the amount of these subsidies, they disagree on the question of whether Boeing will continue to receive FSC/ETI benefits in the post-2006 period.

7.1421 The Panel notes that the factual evidence provided by the European Communities in support of its assertion that Boeing will continue to receive FSC/ETI benefits after 2006 consists of an Internal Revenue Service memorandum that sets forth a prospective interpretation of the TIPRA repeal date. Specifically, the European Communities relies on the following passage from this memorandum:

> "The TIPRA repeal date repeals the {FSC and ETI} binding contract rules for taxable years that begin after May 17, 2006. Because the binding contract rules apply on a transaction-by-transaction basis, we interpret the TIPRA repeal date as repealing the binding contract rules prospectively, on a transaction-by-transaction basis, for transactions entered into during a taxable year that begins after May 17, 2006. In other words, the binding contract rules {continue to} apply to certain transactions, but only if such transactions are <u>not</u> entered into in a taxable year that begins <u>after</u> May 17, 2006."[3087]

[3084] United States' response to question 369, para. 225.

[3085] Statement of James H. Zrust, Exhibit US-1341.

[3086] International Trade Resources LLC, FSC/ETI Tax Benefits Provided to U.S. Large Civil Aircraft Producers, Exhibit EC-12. At paragraph 3, ITR explains that "...Boeing and MD received a total of $2,284 million in FSC/ETI benefits during the period from 1989 through 2005. Of this amount, approximately $2,059 million was related to sales of LCA. In addition, ITR estimates that Boeing will receive a further $140 million in LCA-related FSC/ETI benefits in 2006. Thus, Boeing's total LCA-related FSC/ETI benefits from 1989 through 2006 is estimated to be $2,199 million."

[3087] Qualification for FSC benefits and ETI Exclusions, Office of Chief Counsel, Internal Revenue Service Memorandum Number AM 2007-001, 22 December 2006, Exhibit EC-628, p. 6.

BCI deleted, as indicated **[***]**

7.1422 The analysis in this memorandum is of a general nature and does not specifically relate to Boeing.

7.1423 The Panel notes that with its first written submission the United States provided a statement from Boeing's 2006 annual report:

> "On May 17, 2006, the Tax Increase Prevention and Reconciliation Act of 2005 was enacted, which repealed the FSC/ETI exclusion tax benefit binding contract provisions of the American Jobs Creation Act of 2004. Therefore, 2006 will be the final year for recognizing any export tax benefits. The 2006 effective tax rate was reduced by 5.8% due to export tax benefits."[3088]

7.1424 At a later stage of this proceeding, the United States also submitted a statement of Mr. James H. Zrust, the Vice President of Tax of The Boeing Company, dated 20 July 2009, who "confirm(s) that Boeing did not receive any FSC benefits after 31 December 2006".[3089]

7.1425 Therefore, while it may be true, as argued by the European Communities on the basis of the December 2006 memorandum of the Internal Revenue Service, that it is possible in certain circumstances for a company to continue to benefit from the FSC/ETI measure through the prospective interpretation of the TIPRA repeal provision, this must be weighed against other evidence before the Panel that suggests that Boeing has not actually used this possibility.[3090]

7.1426 Moreover, the assertion of the European Communities that Boeing will continue to benefit from FSC/ETI tax exemptions and tax exclusions in the post-2006 period is inconsistent with the fact that a document submitted by the European Communities on the amounts of subsidies in the period 1989-2006 and 2007-2024 indicates that the amount of FSC/ETI subsidies in the period 2007-2024 is $0.[3091] [3092] This document explicitly states that "{t}he benefits from FSC/ETI after 2006 are zero due to the repeal of the grandfather provisions relating to FSC/ETI."[3093]

7.1427 In any event, the Panel is not convinced that it is necessary to make a finding as to whether Boeing will continue to receive FSC/ETI benefits. In our view, the European Communities has not adequately explained how such a finding is relevant to the Panel's evaluation of the European Communities' claims of present serious prejudice and threat of serious prejudice or to its claim of the existence of prohibited subsidies. In this regard, the Panel finds the response of the European Communities to question 30 unpersuasive. In this question, the Panel sought a clarification from the

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[3088] Boeing Annual Report (2006), Exhibit US-126, p. 55.

[3089] Statement of James H. Zrust, Exhibit US-1341. The statement indicates that Mr Zrust has "personal knowledge of The Boeing Company's... and Boeing Commercial Airplanes' ... tax issues, including issues with respect to the Foreign Sales Corporation... Extraterritorial Income Exclusion Act ...and successor legislation."

[3090] We consider that the mere fact that, as argued by the European Communities, Boeing has not explicitly stated that it does not plan to recognise benefits from FSC or successor legislation in its tax filings after 20 July 2009 is not sufficient to conclude that Boeing will actually use FSC/ETI benefits after July 2009.

[3091] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, pp. 1,5.

[3092] We also note that data provided by the European Communities indicates that the "magnitude" of the FSC/ETI subsidies during the reference period (2004-2006) is $0. International Trade Resources LLC, Calculating On A Per-Aircraft Basis the Magnitude Of The Subsidies Provided to US Large Civil Aircraft, Table 4: Subsidy Magnitude by Subsidy Program, Exhibit EC-13.

[3093] Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, p.7. While the European Communities argues that the non-inclusion of future amounts of FSC/ETI subsidies is due to a lack of information resulting from an absence of cooperation by the United States, we see nothing in this document that suggests that future amounts of FSC/ETI subsidies could not be calculated because of a lack of cooperation by the United States.

BCI deleted, as indicated **[***]**

European Communities as to why it was necessary for the Panel to reach a conclusion on whether Boeing will receive FSC/ETI benefits after 2006, given that the European Communities had not included any future amounts of FSC/ETI benefits in the estimate of the overall amount of FSC/ETI subsidies at issue in this dispute. In its response to this question, the European Communities states that it "includes within the scope of this dispute" the FSC/ETI benefits that Boeing continues to receive after 2006. The Panel considers that the statement that the European Communities "includes within the scope of this dispute" FSC/ETI benefits that Boeing will receive post-2006 is too vague and abstract to clarify how those benefits are relevant to the claims of the European Communities. We note, in this regard, that the European Communities acknowledges that whether or not Boeing continues to receive FSC/ETI post-2006 does not affect its estimate of the overall amount of FSC/ETI subsidies to Boeing.

7.1428 Therefore, the Panel does not consider it necessary to reach a conclusion as to whether there is sufficient evidence before it to support the European Communities' contention that Boeing will continue to receive FSC/ETI benefits in the post-2006 period.

(e) Conclusion

7.1429 **For these reasons, the Panel finds that: (i) tax exemptions and tax exclusions provided to Boeing under the FSC and ETI legislation, including the transition and grandfather provisions of the ETI Act and the AJCA, constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement; and (ii) the amount of FSC/ETI subsidies to Boeing's LCA division in the period 1989-2006 can be estimated to be $2.199 billion.**

12. Summary of conclusions on whether the measures at issue constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement

7.1430 In this section of our Report, we have examined whether the measures challenged by the European Communities constitute specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement, as well as the amount of any such subsidies that is allocable to Boeing's LCA division.

7.1431 We have found that a number of the measures challenged by the European Communities do constitute specific subsidies:

(a) State of Washington and municipalities therein

(i) the Business and Occupation ("B&O") tax reduction provided for in Washington House Bill 2294 ("HB 2294");

(ii) the B&O tax credits for preproduction development, computer software and hardware and property taxes provided for in HB 2294;

(iii) the sales and use tax exemptions for computer hardware, peripherals and software provided for in HB 2294;

(iv) the City of Everett B&O tax reduction;

(v) workforce development programme and employment resource center;

BCI deleted, as indicated **[***]**

(b) State of Kansas and municipalities therein

(i) the property and sales tax abatements provided to Boeing pursuant to Industrial Revenue Bonds ("IRBs") issued by the State of Kansas and municipalities therein;

(c) State of Illinois and municipalities therein

(i) the reimbursement of a portion of Boeing's relocation expenses provided for in the *Corporate Headquarters Relocation Act* ("CHRA");

(ii) the 15-year Economic Development for a Growing Economy ("EDGE") tax credits provided for in the CHRA;

(iii) the abatement or refund of a portion of Boeing's property taxes provided for in the CHRA;

(iv) the payment to retire the lease of the previous tenant of Boeing's new headquarters building;

(d) National Aeronautics and Space Administration (NASA)

(i) the payments made to Boeing pursuant to procurement contracts entered into under the eight aeronautics R&D programmes at issue;

(ii) the access to government facilities, equipment and employees provided to Boeing pursuant to procurement contracts and Space Act Agreements entered into under the eight aeronautics R&D programmes at issue;

(e) Department of Defense (DOD)

(i) the payments made to Boeing pursuant to assistance instruments entered into under the 23 RDT&E programmes at issue;

(ii) the access to government facilities provided to Boeing pursuant to assistance instruments entered into under the 23 RDT&E programmes at issue;

(f) FSC/ETI

(i) the tax exemptions and tax exclusions provided to Boeing under FSC/ETI legislation, including the transition and grandfather provisions of the ETI Act and the AJCA.

7.1432 However, we have concluded that the European Communities has ***not demonstrated*** that the following measures constitute ***specific subsidies*** within the meaning of Articles 1 and 2 of the SCM Agreement, and/or that any amount of the alleged specific subsidy should be allocated to Boeing's LCA division:

(a) State of Washington and municipalities therein

(i) the sales and use tax exemptions for construction services and equipment provided for in HB 2294;

BCI deleted, as indicated **[***]**

(ii) the leasehold tax exemptions provided for in HB 2294;

(iii) the property tax exemptions provided for in HB 2294;

(iv) the I-5 and SR 527 expansion projects, the construction of a rail-barge transfer facility and the expansion of the South Terminal by the Port of Everett;

(v) the waiver of 747 LCF landing fees at Paine Field;

(vi) the freezing of rates charged to Boeing of certain utility services;

(vii) the provision of coordinators in connection with Project Olympus;

(viii) tax and other incentives related to the 747 LCF;

(ix) the assumption by Washington State of costs of MSA-related legal proceedings;

(b) State of Kansas and municipalities therein

(i) the payments made to Spirit Aerosytems arising from the issuance of Kansas Development Finance Authority Bonds ("KDFA") bonds;

(c) DOD

(i) the payments made to Boeing pursuant to procurement contracts entered into under the 23 RDT&E programmes at issue;

(ii) the access to government facilities provided to Boeing pursuant to procurement contracts entered into under the 23 RDT&E programmes at issue;

(d) NASA/DOD

(i) the allocation of intellectual property rights under NASA and DOD R&D contracts and agreements entered into with Boeing;

(ii) the reimbursement of independent R&D and bid and proposal ("IR&D/B&P") expenses under NASA and DOD R&D contracts and agreements with Boeing;

(e) Department of Commerce

(i) the payments made to joint ventures / consortia in which Boeing participated through the Advanced Technology Program;

(f) Department of Labor

(i) the payment made to Edmonds Community College under the High Growth Job Training Initiative.

BCI deleted, as indicated **[***]**

7.1433 With respect to the amount of the specific subsidies found to exist, we have estimated that the amount of these subsidies to Boeing's LCA division was at least $5.3 billion over the period 1989-2006:

Amount of subsidies to Boeing's LCA division over the period 1989-2006[3094]

Government(s) or Government Agency	Measures found to constitute specific subsidies within the meaning of Articles 1 and 2	Amount of the subsidy to Boeing's LCA division over the period 1989-2006
State of Washington and Municipalities therein	- Business and Occupation ("B&O") tax reduction provided for in Washington House Bill 2294 ("HB 2294") - B&O tax credits for preproduction development, computer software and hardware and property taxes provided for in HB 2294 - sales and use tax exemptions for computer hardware, peripherals and software provided for in HB 2294 - City of Everett B&O tax reduction - workforce development programme and employment resource center	$77.7 million
State of Kansas and Municipalities therein	- property and sales tax abatements provided to Boeing pursuant to Industrial Revenue Bonds ("IRBs") issued by the State of Kansas and municipalities therein	$476 million
State of Illinois and Municipalities therein	- reimbursement of a portion of Boeing's relocation expenses provided for in the *Corporate Headquarters Relocation Act* ("CHRA") - 15-year Economic Development for a Growing Economy ("EDGE") tax credits provided for in the CHRA - abatement or refund of a portion of Boeing's property taxes provided for in the CHRA - payment to retire the lease of the previous tenant of Boeing's new headquarters building	$11 million
NASA	- the payments made to Boeing pursuant to procurement contracts entered into under the eight aeronautics R&D programmes at issue - the access to government facilities, equipment and employees provided to Boeing pursuant to procurement contracts and Space Act Agreements entered into under the eight aeronautics R&D programmes at issue	$2.6 billion
DOD	- the payments made to Boeing pursuant to assistance instruments entered into under the RDT&E Program Elements at issue - the access to government facilities provided to Boeing pursuant to assistance instruments entered into under the RDT&E Program Elements at issue	the amount of the subsidy to Boeing's LCA division is unclear
FSC/ETI	- the tax exemptions and tax exclusions provided to Boeing under FSC/ETI legislation, including the transition and grandfather provisions of the ETI Act and the AJCA	$2.2 billion
Total		**at least $5.3 billion**

[3094] For the reasons set out at paragraphs 7.153-7.158 above, the Panel does not take into account any post-2006 subsidy amounts.

BCI deleted, as indicated **[***]**

E. WHETHER THE FSC/ETI MEASURES AND THE WASHINGTON HB 2294 TAX MEASURES ARE PROHIBITED SUBSIDIES WITHIN THE MEANING OF ARTICLE 3 OF THE SCM AGREEMENT

7.1434 In this section of our Report we examine whether the FSC/ETI measures challenged by the European Communities and the taxation measures enacted through HB 2294 are prohibited subsidies within the meaning of Article 3.1(a) of the SCM Agreement.

1. FSC/ETI and successor act subsidies

(a) Introduction

7.1435 The European Communities claims that "FSC/ETI and successor act subsidies" are inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.

7.1436 The United States argues that this claim of the European Communities is superfluous and provides no basis for the Panel to make a finding or render a recommendation.

(b) The measures at issue

7.1437 A description of the measures referred to by the European Communities as "FSC/ETI and successor act subsidies" is provided at paragraphs 7.1378-7.1385 of this Report.

(c) Arguments of the European Communities

7.1438 The European Communities submits that the subsidies provided by the FSC/ETI measures and successor legislation are contingent in law upon export performance within the meaning of Article 3.1(a) of the SCM Agreement, and therefore inconsistent with the obligations of the United States under Article 3.2. The European Communities recalls that WTO panels and the Appellate Body have repeatedly found these tax breaks to constitute WTO-incompatible export subsidies.

7.1439 The European Communities argues that the FSC measure is contingent in law upon export performance within the meaning of Article 3.1(a) because the measure itself provides that the FSC exemptions are available only with respect to "foreign trade income", which arises from the sale or lease of "export property" or the provision of related services. Such "export property" is explicitly limited to goods manufactured, produced, grown or extracted in the United States that are held for direct use, consumption or disposition outside the United States i.e. exports. The existence and amount of the FSC subsidy therefore depends upon the existence of income arising from the exportation of U.S. goods or the provision of related services, based on the text of the FSC measure itself. Consequently, these subsidies are contingent in law upon export performance within the meaning of Article 3.1(a).[3095] This is confirmed by item (e) of the Illustrative List of Export Subsidies in Annex I to the SCM Agreement, which lists the following as an illustrative export subsidy: "The full or partial exemption remission, or deferral specifically related to exports, of direct taxes or social welfare charges paid or payable by industrial or commercial enterprises."[3096]

7.1440 The European Communities argues that the ETI scheme is contingent in law upon export performance within the meaning of Article 3.1(a) because the words of the ETI Act make it clear that, at least in certain defined situations, the ETI subsidy is conditioned upon exportation. The ETI measure allows U.S. taxpayers to exclude only their "extraterritorial income" that is "qualifying

[3095] The European Communities cites the Panel Report, *US – FSC*, paras. 7.106-7.108 and the Appellate Body Report, *US – FSC*, para. 121.

[3096] European Communities' first written submission, paras. 966-967.

foreign trade income" from taxation.[3097] Such income is derived from the sale of "qualifying foreign trade property", which is generally property produced within or outside the United States that is sold for use outside the United States i.e. exports, in those instances when the property is produced within the United States. Thus, with respect to goods produced within the United States, the ETI tax exclusion is available only in the instances when such goods are exported outside the United States. As the ETI Act itself makes exporting a precondition to qualify for the subsidy with respect to goods produced in the United States, the ETI subsidies are contingent in law upon export performance within the meaning of Article 3.1(a).[3098],[3099]

7.1441 The European Communities submits that by maintaining the FSC and ETI subsidies through the grandfather provisions of the ETI Act and the AJCA, the United States continues to grant subsidies based on the original FSC and ETI measures that are contingent in law upon export performance within the meaning of Article 3.1(a). The inconsistency of these measures with Article 3.1(a) was confirmed by the panel and Appellate Body reports in *US – FSC (Article 21.5 – EC II)*. The European Communities contends that the export contingent subsidy continues to be available, especially to companies such as Boeing, because of the manner in which the U.S. Internal Revenue Service has interpreted the TIPRA repeal date.[3100]

7.1442 In its response to a panel question as to whether the European Communities' claim that the FSC/ETI measures are contingent upon export performance within the meaning of Article 3.1(a) is properly before this Panel[3101], the European Communities argues that its claim in this dispute is different from any claim that has previously been litigated before a WTO panel or the Appellate Body. Although the Appellate Body has stated in *Canada – Aircraft* that "adverse effects are presumed" for "cases that involve prohibited export subsidies", prior disputes involving the FSC/ETI scheme did not involve claims or findings of adverse effects within the meaning of Article 5 of the SCM Agreement. Because the European Communities bases the "specificity" aspect of its actionable subsidy claim with respect to FSC/ETI on Article 2.3 of the SCM Agreement, which requires a finding that the subsidy is a prohibited subsidy, the European Communities establishes that the FSC/ETI scheme is a prohibited subsidy. The European Communities recalls in this connection that the Panel in *US – Upland Cotton* found that Brazil had failed to meet its burden of presenting a prima facie case that the FSC/ETI regime was an export subsidy, despite prior Panel and Appellate Body rulings to that effect.[3102]

[3097] ETI Act, § 3(a), IRC §§ 114(a)-(b), Exhibit EC-625.

[3098] The European Communities cites the Panel Report, *US – FSC (Article 21.5 – EC)*, paras. 8.60-8.75 and the Appellate Body Report, *US –FSC (Article 21.5 – EC)*, paras. 113-120.

[3099] European Communities' first written submission, para. 968.

[3100] European Communities' first written submission, paras. 969-970 and 944-945.

[3101] Panel Question 58:

> "In its first written submission, the European Communities recalls that "WTO panels and the Appellate Body have repeatedly found these tax breaks to constitute WTO-incompatible export subsidies" (e.g. para. 964 and footnote 1684). In *US – Shrimp (Article 21.5 – Malaysia)*, the Appellate Body clarified that Appellate Body Reports that are adopted by the DSB must be treated by the parties to a particular dispute "as a final resolution to that dispute". In *EC – Bed Linen (Article 21.5 – India)*, the Appellate Body clarified that an unappealed finding included in a panel report that is adopted by the DSB must likewise be treated "as a *final resolution* to a dispute between the parties in respect of the *particular* claim and the *specific* component of a measure that is the subject of that claim". On that basis, the Appellate Body concluded that a particular claim "was not properly before the Panel". Is the European Communities' claim, i.e. that "subsidies provided by the FSC/ETI measures and successor legislation are contingent in law upon export performance" ...properly before this Panel?"

[3102] European Communities' response to question 58, paras. 201-202.

7.1443 The European Communities also submits that with respect to the export subsidy claim, as such, there has never been a final resolution of at least one aspect of the particular claim at issue in this dispute – namely, whether the FSC/ETI scheme (and its violation of Article 3.1) continues today in the light of (i) TIPRA, which repealed certain aspects of the grandfathering of FSC and ETI tax breaks for tax years beginning after 2006 (which, in Boeing's case, is the 2007 calendar year); and (ii) the 22 December 2006 memorandum from the Internal Revenue Service Office of Chief Counsel indicating that FSC/ETI benefits continue beyond 2006.[3103] Finally, the European Communities argues that it is clear that a Member may choose to challenge a subsidy as being both a prohibited subsidy under Part II of the SCM Agreement and an actionable subsidy under Part III of the SCM Agreement.[3104]

7.1444 In response to the argument of the United States that the TIPRA is a future measure outside the terms of reference of the Panel, the European Communities points out that its panel request expressly includes "any relevant subsequent amendments thereof or successor acts", a formulation that surely covers TIPRA to the extent that it is relevant to this proceeding. More fundamentally, the European Communities is not challenging TIPRA as a separate measure, and it has no interest in doing so given that TIPRA actually repeals certain aspects of FSC/ETI. Rather, the European Communities is challenging the FSC/ETI measures listed in the panel request, to the extent that they provided and, despite TIPRA, continue to provide subsidies to Boeing.[3105]

7.1445 The European Communities considers that the United States' acknowledgement that FSC/ETI-related benefits to Boeing are specific does not obviate the need for the Panel to address the European Communities' claim that the FSC/ETI-related benefits to Boeing are inconsistent with Article 3.1(a).[3106]

7.1446 In response to a panel question, the European Communities states that it does not believe that it is effectively asking the Panel to adjudicate whether the United States has failed to comply with the recommendations and rulings of the DSB in *US - FSC*. However, this issue is immaterial because, in any event, there is no legal bar in the DSU to a complaining Member preferring the route of fresh panel proceedings, as opposed to proceedings under Article 21.5 of the DSU.[3107]

(d) Arguments of the United States

7.1447 The United States does not contest that the FSC/ETI measures, including as applied to Boeing, constituted export subsidies that were prohibited under Article 3 of the SCM Agreement.[3108]

7.1448 In response to a panel question[3109], the United States argues that the European Communities' claim that FSC/ETI measures and successor legislation are contingent in law on export performance is superfluous and provides no basis for the Panel to make a finding or render a recommendation. There is no dispute between the United States and the European Communities as to whether FSC or ETI benefits are subsidies prohibited by the SCM Agreement. They are export-contingent subsidies and, therefore, prohibited subsidies inconsistent with the SCM Agreement. The DSB has ruled that this is

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[3103] European Communities' response to question 58, para. 203.

[3104] European Communities' response to question 58, paras. 204-206.

[3105] European Communities' non-confidential statement at second meeting of the Panel with the parties, paras. 77-78.

[3106] European Communities' response to question 264, para. 466.

[3107] European Communities' response to question 265, para. 467.

[3108] United States' non-confidential statement at first meeting of the Panel with the parties, para. 25 ("The United States does not contest that FSC/ETI was an export subsidy"); United States' response to question 58, para. 163; United States' response to question 60, para. 167; United States' response to question 266, para. 457.

[3109] See above, footnote 3101.

the case, and has recommended that the United States bring those measures into compliance with the SCM Agreement. Another finding that they are export contingent or another recommendation that they be brought into compliance with the SCM Agreement will add nothing to the force or effect of the earlier rulings or recommendations. Therefore, making such a finding or recommendation would be superfluous. The United States notes, in this regard, that Article 3.7 of the DSU provides that the "aim of the dispute settlement mechanism is to secure a positive solution to a dispute". Given the existing rulings and recommendations, which constitute a final resolution to the *FSC/ETI* dispute between the European Communities and the United States, additional rulings and recommendations would not provide any additional assistance to "secure{ing} a positive solution". For these reasons, the Panel should decline to address the question whether FSC or ETI is a prohibited subsidy.[3110] In response to a panel question, the United States argues that a panel can decide not to address a claim where it will not further the resolution of the dispute. The United States also submits that, in its first written submission, the European Communities asks the Panel to recommend that the United States "withdraw its prohibited subsidies without delay", which would mean that the United States would have an additional period of time in which to withdraw FSC/ETI subsidies to Boeing. As the United States has explained, Boeing has already affirmed that it will not be receiving FSC/ETI subsidies after 2006.[3111]

7.1449 The United States contends that, in its response to question 58, the European Communities for the first time states that it seeks a "final resolution" of the question "whether the FSC/ETI (and its violation of Article 3.1 of the SCM Agreement) continues today in the light of (i) the Tax Increase Prevention and Reconciliation Act of 2005 ('TIPRA')." This claim is not within the Panel's terms of reference and, as a consequence, the DSU does not permit the European Communities to bring these claims before the Panel. The European Communities' request for establishment of a panel does not reference TIPRA. Therefore, although the European Communities might "seek" a "final resolution" of whether TIPRA allows a measure to continue, it did not include TIPRA within the terms of reference of this Panel. Thus, the question of whether TIPRA is inconsistent with the SCM Agreement is not properly before the Panel.[3112]

(e) Evaluation by the Panel[3113]

7.1450 The European Communities requests the Panel to make a finding that "FSC/ETI and successor act subsidies" are contingent upon export performance within the meaning of Article 3.1(a) of the SCM Agreement and that, as a consequence, "through the ... federal FSC/ETI tax breaks, the United States provides prohibited subsidies, in violation of Articles 3.1(a) and 3.2 of the *SCM Agreement*".[3114] In this regard, the European Communities also requests the Panel "to recommend that the United States withdraw its prohibited subsidies without delay, as required by Article 4.7 of the *SCM Agreement*".[3115]

7.1451 There is no substantive disagreement between the parties to this dispute that FSC and ETI tax benefits have been provided to Boeing under provisions of U.S. tax law that were inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.

7.1452 The Panel notes the findings made in this regard by the panels and the Appellate Body in *US – FSC*, *US – FSC (Article 21.5 – EC)* and *US – FSC (Article 21.5 – EC II)*.

[3110] United States' response to question 58, paras. 163-166.

[3111] United States' response to question 266, paras. 457-458.

[3112] United States' Comments on European Communities' response to question. 58, paras. 199-201.

[3113] It is well established that it is possible for a measure to be inconsistent with both Article 3 and Article 5 of the SCM Agreement. Panel Report, *US – Upland Cotton*, para. 7.1193; Panel Report, *Korea – Commercial Vessels*, para. 7.334. The United States does not argue otherwise in this case.

[3114] European Communities' first written submission, para. 1655.

[3115] European Communities' first written submission, para. 1656.

7.1453 First, the panel in *US – FSC* made findings regarding Sections 921-927 of the Internal Revenue Code and related measures establishing special tax treatment for FSCs.[3116] The panel found that certain "exemptions identified by the European Communities under the FSC scheme" were financial contributions under Article 1.1(a)(1)(ii) of the SCM Agreement because they involved the foregoing of revenue which was otherwise due[3117] and that these exemptions conferred a benefit within the meaning of Article 1.1(b) of the SCM Agreement.[3118] Having found that the tax exemptions were subsidies, the panel also found that they were contingent in law upon export performance within the meaning of Article 3.1(a) of the SCM Agreement.[3119] The Appellate Body upheld the panel 's findings that the FSC exemptions were financial contributions within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement and that these exemptions were subsidies contingent upon export performance that were prohibited under Article 3.1(a) of the SCM Agreement.[3120]

7.1454 Second, the panel in *US – FSC (Article 21.5 – EC)* made findings with respect to the ETI Act. The panel found that the ETI Act's exclusion from gross income of certain "extraterritorial income" gave rise to a financial contribution in the form of a foregoing of government revenue that was otherwise due within the meaning of Article 1.1(a)(1)(ii) of the SCM Agreement[3121] and that this financial contribution conferred a benefit, such that a subsidy within the meaning of Article 1.1 existed.[3122] The panel also found that this subsidy was contingent in law upon export performance and was thereby inconsistent with Article 3.1(a) of the SCM Agreement.[3123] Moreover, the panel found that for FSCs in existence as of 30 September 2000, the FSC subsidies continued in operation for one year and that, with respect to FSCs that had entered into long-term binding contracts with unrelated parties before 30 September 2000, the Act did not alter the tax treatment of those contracts for an indefinite period of time. The panel therefore found that the United States had not fully withdrawn the FSC subsidies found to be prohibited export subsidies inconsistent with Article 3.1(a) and had thereby failed to implement the recommendations and rulings of the DSB pursuant to Article 4.7 of the SCM Agreement.[3124] The Appellate Body upheld the panel's findings that the ETI measure involved financial contributions through the foregoing of government revenue otherwise due[3125] and that the ETI measure granted subsidies contingent in law upon export performance within the meaning of Article 3.1(a).[3126] It also upheld the panel's finding that the United States had not fully withdrawn the FSC subsidies found to be prohibited export subsidies under Article 3.1(a) and had thereby failed to implement the recommendations and rulings of the DSB made pursuant to Article 4.7 of the SCM Agreement.[3127]

7.1455 Third, in *US – FSC (Article 21.5 – EC II)*, the panel found that the United States, by enacting Section 101 of the AJCA, maintained prohibited FSC and ETI subsidies through transition and grandfather clauses in section 101 of the AJCA and thereby continued to fail to implement fully the operative DSB recommendations and rulings to withdraw the prohibited subsidies.[3128] The Appellate Body upheld this finding.[3129]

[3116] Panel Report, *US – FSC*, para. 1.1.
[3117] Panel Report, *US – FSC*, para. 7.102.
[3118] Panel Report, *US – FSC*, para. 7.103.
[3119] Panel Report, *US – FSC*, paras. 7.108, 7.130.
[3120] Appellate Body Report, *US – FSC*, paras. 95, 121.
[3121] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.43.
[3122] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.48.
[3123] Panel Report, *US – FSC (Article 21.5 – EC)*, para. 8.75, 8.110.
[3124] Panel Report, *US – FSC (Article 21.5 – EC)*, paras. 8.168-8.170.
[3125] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, para. 106.
[3126] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, para. 120.
[3127] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, para. 231.
[3128] Panel Report, *US – FSC (Article 21.5 – EC II)*, para. 7.65.
[3129] Appellate Body Report, *US – FSC (Article 21.5 – EC II)*, para. 96.

BCI deleted, as indicated **[***]**

7.1456 As noted above[3130], in its factual description of the "FSC/ETI and successor act subsidies" that are the subject of its complaint under Article 3, the European Communities refers to: (i) the original FSC provisions; (ii) the ETI Act, including its transition and grandfather clauses with respect to the FSC tax benefits; (iii) the AJCA, which repealed the ETI Act but maintained the FSC grandfather clause and provided for new transition and grandfather clauses with respect to the ETI tax benefits; and (iv) the TIPRA, which repealed the grandfather clauses for FSC and ETI tax benefits.[3131] The original FSC provisions were repealed on 30 September 2000 and the ETI Act was repealed on 31 December 2004. With the exception of the TIPRA, all of the legal provisions identified by the European Communities pursuant to which Boeing received FSC and ETI tax benefits have been the subject of panel and Appellate Body reports that have found these measures to be inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement and that have given rise to a recommendation addressed to the United States pursuant to Article 4.7 of the SCM Agreement that it withdraw the subsidy without delay.[3132]

7.1457 Against this background, the United States, while agreeing that FSC/ETI was a prohibited export subsidy, submits that the European Communities' claim that FSC/ETI measures and successor legislation is contingent in law on export performance is superfluous and provides no basis for the Panel to make a finding or render a recommendation.[3133]

7.1458 Therefore, the question before the Panel is not what should be the correct legal analysis of the FSC/ETI and successor act subsidies under Article 3 of the SCM Agreement. Nor is the question whether the claim of the European Communities is within the Panel's terms of reference.[3134] Rather, the key question before this Panel is whether the Panel should: (i) make a finding under Article 3 of the SCM Agreement that FSC/ETI and successor act subsidies granted to Boeing are inconsistent with Article 3 of the SCM Agreement, based on the reasoning and findings of the panels and the Appellate Body in the FSC/ETI dispute, and make a recommendation under Article 4.7 that the United States withdraw the subsidy without delay; or (ii) refrain from making such a finding under Article 3 and recommendation under Article 4.7 on the grounds that, as argued by the United States, the DSB has already ruled that the FSC and ETI and successor act subsidies are prohibited subsidies under Article 3 and that "{a}nother finding that they are export contingent or another recommendation that they be brought into compliance with the SCM Agreement will add nothing to the force or effect of the earlier rulings or recommendations".

7.1459 The Panel notes that at the time of its establishment, in February 2006, the original FSC and ETI legislation no longer applied. Pursuant to the provisions of the AJCA, however, ETI tax

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[3130] See above, paras. 7.1379-7.1385.

[3131] European Communities' first written submission, paras. 923-945.

[3132] Panel Report, *US – FSC*, para. 8.8. At the request of the United States, the DSB agreed to extend the period for the withdrawal of the FSC subsidies from 1 October 2000 until 1 November 2000. The panels in *US – FSC (Article 21.5 –EC) and US – FSC (Article 21.5 – EC II)* held that the original recommendation and rulings made in 2000 remained operative. See e.g. Panel Report, *US – FSC (Article 2.15 – EC II)*, paras. 8.1-8.2.

[3133] United States' response to panel question no. 58, para. 163. The United States qualifies the FSC/ETI measure as a "measure withdrawn based on prior recommendations and rulings of the Dispute Settlement Body". United States' response to question 80, para. 209. It also states that "the DSB has already ruled that this measure was inconsistent with the SCM Agreement, as it provided a prohibited subsidy. The United States has terminated the measure. FSC/ETI is, therefore, not properly at issue in this case." United States' response to question 92, para. 234.

[3134] It is important to note that, with the exception of the TIPRA, the United States does not argue that the claim of the European Communities with respect to FSC/ETI and successor act subsidies is not within the Panel's terms of reference. Rather, the view of the United States that the Panel should not address the claim of the European Communities regarding FSC/ETI and successor act subsidies appears to be based principally on considerations relating to the role of the Panel under Article 3.7 of the DSU.

advantages continued to be available in certain situations. First, transition clauses allowed for the ETI measure to continue (albeit to a more limited extent) with respect to qualifying transactions entered into between 1 January 2005 and 31 December 2006. Second, the AJCA provided for the grandfathering, for an indefinite period, of transactions that occurred pursuant to a binding contract between the taxpayer and an unrelated person, which was in effect on 17 September 2003. Moreover, the AJCA did not repeal or change section 5(c)(1) of the ETI Act, which provided for the grandfathering, for an indefinite period, of FSC tax benefits in respect of transactions entered into pursuant to a binding contract which existed on 30 September 2000. The United States has not contested in this dispute that Boeing has used the transition and grandfather provisions of the AJCA. The Panel therefore finds that at the time of its establishment, the FSC/ETI measures challenged by the European Communities continued to exist insofar as Boeing used the transition and grandfather provisions of the AJCA and ETI Act.

7.1460 The Panel is not persuaded that the existence of the DSB rulings and recommendations in the FSC/ETI dispute, and the steps taken by the United States pursuant to those rulings and recommendations, provide a compelling reason for this Panel not to make a finding under Article 3 of the SCM Agreement with respect to the FSC and ETI tax measures as they applied to Boeing at the time of the Panel's establishment.

7.1461 First, the findings made by the panels and the Appellate Body in the FSC/ETI dispute were in respect of the legislative provisions as such and not in relation to these provisions as applied in particular cases. As explained above[3135], it is the Panel's understanding that in this dispute the European Communities challenges specific FSC/ETI subsidies received by Boeing. The Panel therefore is of the view that the subject matter of the present dispute is not exactly identical to the subject matter of the FSC/ETI dispute.[3136] The Panel also takes into account the fact that in this case, as argued by the European Communities, a finding that the FSC/ETI and successor act subsidies are export subsidies within the meaning of Article 3 provides the basis for finding that these subsidies are specific by virtue of Article 2.3 of the SCM Agreement.

7.1462 Second, the Panel is aware that subsequent to its establishment developments have occurred that significantly affect the continued existence of the measures at issue. The transition provisions of the AJCA expired at the end of 2006; the grandfather provisions of the ETI Act and the AJCA were repealed by the TIPRA, which was enacted in 2006; and, as argued by the United States, Boeing has indicated that it will not use any FSC or ETI tax advantages post-2006. Assuming that these developments mean that the FSC and ETI tax measures no longer exist in respect of Boeing, this does not imply that we should not make a finding on these measures. The Panel is of the view that these developments might be relevant to the question of whether it is appropriate to make a *recommendation* but that they are not relevant to determining whether the Panel should make a *finding*. While "the fact that a measure has expired may affect what recommendation a panel may make...it is not, however, dispositive of the preliminary question of whether a panel can address claims in respect of that measure".[3137]

7.1463 In sum, the Panel finds that it is appropriate to make a finding under Article 3 with respect to the FSC/ETI and successor act provided to Boeing. The reasoning and findings of the panels and the

[3135] See above, para. 7.1394.

[3136] The Panel notes that, apart from a claim under Article 3 of the SCM Agreement, the European Communities also makes a claim that the FSC/ETI subsidies, together with the other subsidies at issue, cause adverse effects within the meaning of Article 5 of the SCM Agreement. While previous WTO dispute settlement proceedings have addressed the question of whether legal provisions relating to the FSC/ETI measures at issue in this dispute are inconsistent with Article 3 of the SCM Agreement, whether these measures have caused adverse effects within the meaning of Article 5 of the SCM Agreement has never been addressed in WTO dispute settlement.

[3137] Appellate Body Report, *US – Upland Cotton*, para. 272.

Appellate Body in *US – FSC*, *US – FSC (Article 21.5 – EC)* and *US – FSC (Article 21.5 – EC II)* imply that the application of the FSC/ETI provisions to Boeing is inconsistent with Articles 3.1 and 3.2 of the SCM Agreement. The Panel thus finds that with respect to the tax advantages enjoyed by Boeing at the time of the establishment of the Panel under the transition and grandfather provisions of the ETI Act and the AJCA, the United States acted inconsistently with Articles 3.1(a) and 3.2 of the SCM Agreement by granting subsidies contingent in law upon export performance.

(f) Conclusion

7.1464 **For these reasons, the Panel finds that FSC/ETI measures challenged by the European Communities that were in force at the time of the Panel's establishment are export-contingent subsidies to Boeing's LCA division prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement.**

2. State of Washington: HB 2294 tax incentives

(a) Introduction

7.1465 The European Communities argues that the grant of the subsidies under HB 2294 is contingent in fact upon export performance because the grant is tied to actual or anticipated exportation or export earnings. The grant is thereby inconsistent with Article 3.1(a) of the SCM Agreement.

7.1466 The United States contends that the European Communities has failed to establish any "tie" between the grant of the subsidies and anticipated exportation or actual exportation and therefore HB 2294 is not inconsistent with Article 3.1(a) of the SCM Agreement.

(b) Measure at issue

7.1467 We recall that HB 2294 came into effect in December 2003 and is entitled *"An Act Related to Retaining and Attracting the Aerospace Industry to Washington State"*.[3138] A description of HB 2294 is provided at paragraphs 7.41-7.68 of this Report, which addresses the existence of taxation-related subsidies in Washington State. HB 2294 includes five tax measures which the European Communities challenges as subsidies to Boeing's LCA division. The measures include a B&O tax reduction; B&O tax credits; sales and use tax exemptions; a leasehold excise tax exemption; and a property tax exemption. The Panel has found that the B&O tax reduction, the B&O tax credits and the sales and use tax exemption for construction services and equipment are specific subsidies to Boeing.

7.1468 Section 17(1)(a) of HB 2294 provides that the legislation takes "effect on the first day of the month in which the governor and a manufacturer of commercial airplanes sign a memorandum of agreement regarding an affirmative final decision to site a significant commercial airplane final assembly facility in Washington state". Section 17(1)(b) also provides that HB 2294 is "contingent upon the siting of a significant commercial airplane final assembly facility in the state of Washington".

[3138] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54.

BCI deleted, as indicated **[***]**

7.1469 A "significant commercial airplane final assembly facility" is defined as:

> "{A} location with the capacity to produce at least thirty-six superefficient airplanes a year."

A "superefficient airplane" is defined as:

> "{A} twin aisle airplane that carries between two hundred and three hundred fifty passengers, with a range of more than seven thousand two hundred nautical miles, a cruising speed of approximately mach .85, and that uses fifteen to twenty percent less fuel than other similar airplanes on the market."

7.1470 The parties to the dispute agree that the 787 meets the definition of a "superefficient airplane".[3139]

7.1471 Boeing satisfied the requirements of section 17 of HB 2294 upon signing the Project Olympus Memorandum of Agreement, which confirms that the MSA constitutes an agreement to site the 787 final assembly facility in the City of Everett, as required under HB 2294.[3140] Specifically, the State confirms in the Project Olympus Memorandum of Agreement that the facilities site in Everett "meets the definition of a significant commercial airplane final assembly facility".[3141]

(c) Arguments of the European Communities

7.1472 The European Communities argues that the subsidies provided by HB 2294 are contingent in fact upon export performance under Article 3.1(a) of the SCM Agreement.[3142]

7.1473 In its first written submission, the European Communities advances its view of the correct legal interpretation of Article 3.1(a) and makes submissions regarding why the subsidies provided under HB 2294 meet the conditions of export contingent subsidies. At this point of its submissions, the European Communities also makes various arguments in the alternative regarding the correct interpretation of Article 3.1(a). Further, in response to Panel questions, the European Communities advances new interpretations of the terms of Article 3.1(a), including an interpretation that it does *not* advocate, and makes new submissions regarding why the subsidies provided under HB 2294 are export contingent.

7.1474 In its first written submission, the European Communities argues that three elements must be established under Article 3.1(a) in order to make out a claim of de facto export contingency. These elements are (i) the required condition (export performance); (ii) the required consequence; and (iii) the required contingent relationship.[3143] We understand the three elements to amount to a restatement of Article 3.1(a), namely that the subsidy ("the required consequence") be contingent upon ("the required contingent relationship") export performance ("the required condition").

7.1475 In relation to the first element, the European Communities submits that the "required condition" in Article 3.1(a) is that the subsidy be conditional on export performance and not just on performance in general.[3144] The European Communities refers to this as a requirement to demonstrate "a *favouring* or discrimination in favour of a product that will inevitably be generally exported or

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[3139] United States' first written submission, para. 686, footnote 887 and European Communities' first written submission, para. 974.

[3140] European Communities' first written submission, para. 975.

[3141] Memorandum of Agreement for Project Olympus, 19 December 2003, Exhibit EC-57, para. 975.

[3142] European Communities' first written submission, paras. 971 and 977.

[3143] European Communities' first written submission, paras. 980, 990 and 991.

[3144] European Communities' first written submission, para. 980.

incorporated within an exported product".[3145] The European Communities argues that the subsidy measure in issue in this dispute, namely "HB 2294 and/or the Project Olympus Master Site Agreement", and the instances of its application, demonstrate the existence of the "required condition" (export performance).[3146] This is because, under the terms of HB 2294, only companies that "contribute to a product that will necessarily generally be exported", namely manufacturers of commercial airplanes and their components, benefit from the subsidies under HB 2294.[3147] In this way, HB 2294 acts as a "filter", ensuring that only companies involved in producing a product that will be exported, are eligible for the subsidies.[3148] Further, the European Communities argues that HB 2294 is contingent upon the requirement to establish a capacity to produce at least thirty-six superefficient 787s per year. According to the European Communities, market forecasts indicate that the domestic United States market could not absorb such a production level and that a significant portion of 787 sales would consist of exports.[3149] Finally, the European Communities notes that Boeing is a highly export-oriented company and cites evidence in support of this.[3150]

7.1476 According to the European Communities, the second element that must be established to succeed in an Article 3.1(a) claim is the "required consequence". The European Communities states that "HB 2294 provides for the *grant* of a subsidy … The consequence required by Article 3.1(a) and footnote 4 … is thus apparent".[3151] We understand the "required consequence" to be a requirement that a subsidy be granted.

7.1477 Finally, the European Communities submits that the third element, the "required contingent relationship", also exists in relation to HB 2294. We understand the European Communities to be arguing that the second element, the grant of a subsidy, must be contingent upon the first element, namely export performance. The European Communities argues that the required contingent relationship exists because eligibility for the subsidy is contingent upon being a manufacturer of commercial airplanes or components, which are products that will necessarily be exported. Further, HB 2294 is contingent upon building a plant with the capacity to produce at least thirty-six superefficient airplanes per year.[3152]

7.1478 Throughout its first written submission, largely in the footnotes, the European Communities also refers to various alternative arguments that it makes.[3153] In response to Panel questioning regarding how many distinct legal arguments it makes, the European Communities explicitly sets out three legal arguments that it advances, not all of which rely on the three elements referred to in its first written submission.[3154]

7.1479 In answer to question 56, the European Communities sets out its **first legal argument**. The argument relates to one particular component of HB 2294, namely the B&O tax rate reduction. The

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[3145] European Communities' first written submission, para. 980.
[3146] European Communities' first written submission, para. 980, footnote 1711.
[3147] European Communities' first written submission, para. 980 and European Communities' non-confidential oral statement at the first meeting with the panel, para. 111.
[3148] European Communities' first written submission, para. 989.
[3149] European Communities' first written submission, para. 981.
[3150] European Communities' first written submission, paras. 982-988.
[3151] European Communities' first written submission, para. 990.
[3152] European Communities' first written submission, para. 991.
[3153] European Communities' first written submission, para. 980 footnote 1712; para. 989 footnote 1731; para. 992; para. 996 footnote 1735.
[3154] European Communities' response to question 56. In particular, not all of its arguments contend that the subsidy must be contingent upon *export* performance, in that there must be a favouring or discrimination in favour of a product that will inevitably be generally exported or incorporated within an exported product, as the European Communities argues in its first written submission. See para. 7.1491 of this Report regarding a fourth legal argument that the European Communities outlines in response to question 56 but does *not* advance.

BCI deleted, as indicated **[***]**

European Communities argues that the value of the B&O tax rate reduction increases for each additional sale of a Boeing LCA (it is an *ad valorem* subsidy), including export sales.[3155] In other words, the amount of the subsidy is contingent upon sales, including export sales. According to the European Communities, this is sufficient to establish that the subsidy is prohibited within the meaning of the SCM Agreement because under Article 3.1(a) "it is sufficient to demonstrate the existence of a subsidy grant contingent upon sales, regardless of whether such sales occur in the domestic market (the United States) or with respect to exports. That is, there is no need to demonstrate that the subsidy favours exports or is greater in the case of export".[3156] Therefore, in contrast to its first written submission, the European Communities argues that under Article 3.1(a), it is sufficient to demonstrate that the grant of a subsidy is contingent upon performance (sales) and there is no need to demonstrate that it is contingent upon *export* performance or that there is "favouring" of exports.

7.1480 In relation to this first legal argument, although all of the European Communities' submissions relate to export contingency "in fact" rather than "in law", in its second written submission, the European Communities states:

> "{D}uring the meeting of the Panel, the United States effectively admitted that the HB 2294 B&O tax rate reductions are subsidies contingent *in law* or in fact upon export performance."[3157]

7.1481 The European Communities does not provide further submissions regarding export contingency "in law". It is not clear whether, merely by stating the United States has admitted that the B&O tax reduction is contingent in law upon export performance, that the European Communities claims, in relation to its first legal argument, that the subsidy is contingent in law, as well as in fact, on export performance.

7.1482 The European Communities' **second legal argument** is one that it contends the United States has advocated "elsewhere".[3158] The argument relates to HB 2294 in its entirety, rather than to a particular taxation measure, such as the B&O tax reduction. The European Communities argues that if the facts demonstrate that there was the "anticipating of" exports and that the grant of the subsidies under HB 2994 was "tied to" such "anticipating of" exports, then HB 2294 constitutes a measure contingent in fact upon export.[3159] The European Communities notes that the subsidies under HB 2294 were contingent upon siting an assembly facility in Washington that could produce at least thirty-six 787s per year. This amounts to a grant of subsidies contingent in fact upon anticipated export sales of 787s because demand in the United States market was not such that all thirty-six 787s could be sold domestically. Rather, some of the aircraft would need to be exported.[3160] Under this argument, the European Communities asserts that the State of Washington expected or anticipated exports and if this expectation was a part of the consideration or motivation or intent in the provision of the subsidy, this is sufficient to prove the necessary contingent relationship.[3161]

7.1483 The European Communities states that "it is assumed, for the purposes of this second argument, that it is still necessary to demonstrate some element of 'favouring'".[3162] The reference to favouring seems to be a reference to the first element outlined in its first written submission, namely

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[3155] European Communities' response to question 56, paras. 190 and 192
[3156] European Communities' response to question 56, para. 190.
[3157] European Communities' second written submission, para. 642 (emphasis added).
[3158] European Communities' response to question 56, para. 193 and European Communities' first written submission, paras. 992-996.
[3159] European Communities' response to question 56, para. 193.
[3160] European Communities' first written submission, paras. 992-996.
[3161] European Communities' non-confidential oral statement at the first meeting with the panel, para. 108.
[3162] European Communities' response to question 56, para. 193.

the "required condition" of "export performance" (and not just performance in general), which the European Communities argues requires a demonstration of a "favouring or discrimination in favour of a product that will inevitably be generally exported or incorporated within an exported product".[3163]

7.1484 The European Communities submits that its **third legal argument**:

> "{I}s the same as the second argument, but proceeds on the basis that it is unnecessary to demonstrate any favouring of exports (a point admitted by the United States during the first hearing). "[3164]

7.1485 In support of its second and third legal arguments, the European Communities argues that the facts overwhelmingly demonstrate that production is anticipated to exceed domestic demand and that the only reasonable inference to draw is that some aircraft will be exported.[3165] Further, the enactment of HB 2294 was "tied to" such anticipation. This is because the subsidies were granted contingent upon the creation of a certain capacity and it was anticipated that the capacity would entail production and export.[3166] In response to Panel questioning, the European Communities refers to evidence which it alleges demonstrates that the granting authorities were aware of the capacity of the United States' market.[3167]

7.1486 In response to the United States' argument that HB 2294 does not require the airplane assembly facility *actually* to produce thirty-six aircraft, but only to have the *capacity* to produce at that level, and that the European Communities fails to understand this crucial distinction, the European Communities argues that, in the context of the LCA market, the capacity requirement is tantamount to an export requirement.[3168] This is because aircraft manufacturers do not create capacity that will stand idle. Production capacity is decided after a manufacturer knows how many aircraft it will need to produce, based on the orders it has received. If Boeing did not use its capacity the financial consequences would be grave.[3169] Therefore, the capacity requirement is equivalent to a production requirement, which is tantamount to a requirement to export, given the demand levels in the domestic market.[3170]

7.1487 The European Communities characterizes the argument of the United States outlined in the preceding paragraph as an objection to the absence of an *express requirement*, or a legal obligation, to produce or to export.[3171] The European Communities notes that the United States has "elsewhere" taken a different view, namely that there does not need to be a legal obligation to perform, that necessarily involves export sales, in order successfully to argue that a subsidy is contingent in fact upon anticipated exports. The European Communities submits that "it agrees with the general proposition", only on the condition that it be applied consistently in all WTO disputes, which would result in all of the United States' Article 3 claims being rejected in *EC – Aircraft*.[3172] In the alternative, the European Communities argues that the absence of a requirement to export is not fatal

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[3163] European Communities' first written submission, para. 980.
[3164] European Communities' response to question 56, para. 194.
[3165] European Communities' comments on United States' response to question 54, para. 191.
[3166] European Communities' comments on United States' response to question 54, para. 192.
[3167] European Communities' response to question 267.
[3168] European Communities' response to question 54, para. 177.
[3169] European Communities' response to question 54, paras. 175-177.
[3170] European Communities' response to question 54, para. 179 and European Communities' non-confidential oral statement at the first meeting with the panel, paras. 101-104.
[3171] European Communities' response to question 54, para. 179 and European Communities' non-confidential oral statement at the first meeting with the panel, para. 102.
[3172] European Communities' non-confidential oral statement at the first meeting with the panel, para. 103 and European Communities' response to question 54, para. 179.

to its claim.[3173] The European Communities notes that in arguing that a subsidy is in fact contingent upon export, regardless of what is expressly provided for in the text of the measure, it is necessary to assess the facts of the situation, including the reality of the marketplace, and to draw the reasonable and necessary inferences from those facts.[3174]

7.1488 In question 57, the Panel asked the European Communities to clarify whether it is arguing that the granting of the subsidies was tied to "actual" or to "anticipated" exportation. The European Communities' response, which applies to **all three of its legal arguments**, was:

> "{I}n order to be certain that it has made all the necessary arguments, the European Communities submits that each of the relevant measures provides for a subsidy contingent upon *actual* export; or alternatively contingent upon *anticipated* export; or alternatively contingent upon actual *or* anticipated export; or alternatively contingent upon actual *and* anticipated export."[3175]

7.1489 In relation to the correct legal interpretation of "actual" and "anticipated", the European Communities does not submit its own view. Rather, the European Communities characterizes the United States' position as being that the terms mean "real" and "potential" respectively.[3176] The European Communities also notes that another possible interpretation for the terms, although one it does not advocate, is "past" and "future" respectively.[3177] In relation to its **first legal argument**, the European Communities argues that on either interpretation, a claim under Article 3.1(a) can be made out. If the correct interpretation is in accordance with the United States' submissions, the grant of the subsidies is contingent upon "actual" exports, in that the unconditional right to the subsidies only arises when the sale takes place. In the alternative, if the correct meaning of the terms is "past" and "future", the grant of the subsidies is tied to "anticipated" exports because they are in the future.[3178] In relation to its **second and third legal arguments,** the European Communities reasons that if the United States' interpretation of the terms "actual" and "anticipated" is correct, namely "real" and "potential" respectively, under its second and third arguments the tie is to "anticipated" exports. This is because the exports were expected and this was a consideration or motivation in the adoption of HB 2294.[3179] In what is really a reference to its first legal argument, the European Communities continues that HB 2294 also provides for the grant of a subsidy tied to "actual" exports, because the B&O tax reductions are tied to sales.[3180] The European Communities also reasons that if "actual" or "anticipated" means "past" or "future", under its second and third legal arguments the grant of the subsidies is tied to both actual and to anticipated export. They are tied to actual (i.e. to past) exports because admission to the programme is based on a pre-selection criteria that captures companies that contribute to a product that has been exported in the past. They are also tied to anticipated (i.e. to future) exports because of the continuing nature of the programme and because of the B&O tax rate reduction.[3181]

[3173] European Communities' non-confidential oral statement at the first meeting with the panel, para. 104.

[3174] European Communities' comments on United States' response to question 54, para. 189.

[3175] European Communities' response to question 57, para. 195.

[3176] European Communities' response to question 57, paras. 195, 198-200. However, we note at para. 7.1502 of this Report, that the United States submits that "anticipated" means "expected", rather than "potential".

[3177] European Communities' response to question 57, paras. 195, 198-200. See also, European Communities' response to question 56, paras. 184-189 for the "reference interpretation", that the European Communities does not advocate.

[3178] European Communities' response to question 57, para. 198.

[3179] European Communities' response to question 57, para. 200.

[3180] European Communities' response to question 57, para. 200.

[3181] European Communities' response to question 57, para. 199.

BCI deleted, as indicated **[***]**

7.1490 In sum, the arguments advanced by the European Communities in response to question 56 can be expressed as:

(a) HB 2294 is de facto contingent upon export performance because the B&O tax reduction, an *ad valorem* subsidy, is contingent upon sales, including export sales. The European Communities asserts that the grant of the subsidy is tied to "actual" or "anticipated" exportation.

(b) HB 2294 is de facto contingent upon export performance because its grant was conditioned upon the establishment of a facility with the capacity to produce 36 superefficient airplanes. The subsidies under HB 2294 are tied to "actual" or "anticipated" exportation. The legal test requires some element of "favouring" of exports.

(c) The final legal argument is the same as the argument in the preceding bullet point, except that no element of "favouring" of exports need be proven. [3182]

7.1491 As well as advancing its three legal arguments, the European Communities provides a "reference interpretation", which it does *not* advance, but which it contends may "assist the Panel in understanding the precise nature of the European Communities' claims".[3183] The "reference interpretation" appears to be an interpretation that contradicts the position taken by the United States' in *EC and certain member States – Large Civil Aircraft* regarding Article 3.1(a). Although not explicitly expressed, the European Communities' purpose in including the "reference interpretation" seems to be to suggest that if the Panel adopts the position in the "reference interpretation", then the same reasoning should apply in *EC and certain member States – Large Civil Aircraft* and lead to the rejection of all of the United States' Article 3 claims in that case. In essence, the European Communities' position would appear to be that if Article 3 is interpreted consistently by this Panel and the panel in *EC and certain member States – Large Civil Aircraft*, the prohibited subsidy claims in each of the cases must either both be successful or both fail.

(d) Arguments of the United States

7.1492 The United States refutes the European Communities' claim that the tax measures in HB 2294 are prohibited subsidies because they are contingent upon export performance.[3184]

[3182] We note that in its non-confidential oral statement at the first meeting with the Panel, the European Communities refers to its "primary argument" and elaborates that HB 2294 acts as a "filter", with the result that the defining characteristic of the companies that are eligible for the subsidy is that they contribute to a product that will necessarily be exported. The European Communities concludes that there is a "clear correlation" between actual or anticipated export performance and eligibility for the benefit. The European Communities reasons that this demonstrates the "condition required" by Article 3.1(a). Although it may be possible to interpret this is as a fourth, distinct argument, which asserts that if those eligible for a subsidy are all exporters, contingency in fact can be found, it is unlikely that this is in fact a fourth argument. The reference to demonstration of the "condition required" indicates that the "filter argument" merely goes to establishing the first element detailed in the European Communities' first written submission ("export performance" as a "required condition", to demonstrate an element of "favouring" a product that will be exported). Further, in its question asking the European Communities to clarify how many legal arguments it is making, the Panel refers to this section of the non-confidential oral statement at the first meeting with the panel. Therefore, presumably if it was an argument distinct to the three arguments advanced in response to question 56, the European Communities would have so indicated in its response to question 56.

[3183] European Communities' response to question 56, paras. 184-189 and European Communities' response to question 270, para. 476.

[3184] United States' first written submission, para. 684.

7.1493 According to the United States, in *Canada – Aircraft,* the Appellate Body stated that footnote 4 of the SCM Agreement requires that three substantive factual elements be established by a complaining party seeking to demonstrate that a subsidy is de facto contingent upon export performance. The three elements that must be proved are (i) the granting of a subsidy (ii) that is "tied to" (iii) actual or anticipated exportation or export earnings.[3185] Further, footnote 4 to Article 3.1(a) provides that "the mere fact that a subsidy is granted to enterprises which export shall not for that reason alone be considered to be an export subsidy". In *Canada – Aircraft,* the Appellate Body held that this footnote "precludes a Panel from making a finding of de facto export contingency for the sole reason that the subsidy is granted to enterprises that export".[3186] Therefore, the United States argues that the evidence the European Communities submits in its first written submission regarding the fact that Boeing is an export-oriented company does not meet the relevant legal standard for a claim under Article 3.1(a).[3187] Further, to the extent the European Communities advances an argument that the grant of the alleged subsidy is tied to actual or anticipated export performance because the defining characteristic of the companies that benefit from the subsidy is that they contribute to a product that will necessarily be exported, the United States argues that this demonstrates nothing more than that "a subsidy is granted to enterprises which export". Footnote 4 provides that this reason alone cannot establish the existence of an export contingent subsidy.[3188]

7.1494 In relation to all three legal arguments[3189] advanced by the European Communities, the United States argues that the European Communities has not proven element (i) identified in *Canada – Aircraft*, namely the granting of a subsidy.[3190] In this regard, the United States relies on the submissions on the existence of a subsidy in relation to Washington taxation measures, found at Part VII.D.2(a) of this Report.

7.1495 The United States refutes the European Communities' **first legal argument**, namely that the B&O tax reduction is a subsidy contingent upon both domestic and export sales and therefore is an export contingent subsidy.[3191] The United States agrees with the European Communities' submission that it is not necessary to demonstrate that a "subsidy favours exports" in order for a claim to be successful under Article 3.1(a). However, according to the United States, this does not imply that a subsidy contingent upon sales is an export contingent subsidy.[3192] The relevant enquiry is whether the granting of the subsidy is tied to actual or anticipated exportation or export earnings. The United States argues, relying on the panel decision in *Canada – Aircraft,* that this is not the same as a tie to mere sales. The United States notes that the European Communities has presented no evidence of a tie between the grant of the subsidy and actual or anticipated exportation or export earnings, for example by presenting evidence that the State of Washington relied on projections of export sales in providing Boeing with the tax treatment in HB 2294.[3193] The United States argues that the possibility that the amount of a subsidy is contingent upon sales, which could include export sales, does not establish the required tie. This is clear from footnote 4 to the SCM Agreement, which provides that "the mere fact that a subsidy is granted to enterprises which export shall not for that reason alone be considered to be an export subsidy".[3194]

[3185] United States' first written submission, para. 690.
[3186] United States' first written submission, para. 688.
[3187] United States' first written submission, paras. 689-690.
[3188] United States' second written submission, para. 157.
[3189] Namely, the three legal arguments the European Communities identifies in its response to question 56 and which are summarized at para. 7.1490 of this Report.
[3190] United States' first written submission, para. 691.
[3191] United States' comments on European Communities' response to question 56, paras. 183-188.
[3192] United States' comments on European Communities' response to question 56, para. 184.
[3193] United States' comments on European Communities' response to question 56, para. 186.
[3194] United States' comments on European Communities' response to question 56, para. 187.

7.1496 In relation to the European Communities' **second legal argument**, the United States repeats its position that there is no requirement under Article 3.1(a) to demonstrate some element of "favouring".[3195] With respect to the **second and third legal arguments**, which focus on the fact that HB 2294 was contingent upon Boeing establishing the capacity to produce thirty-six superefficient aircraft, the United States argues that the European Communities has made out none of the three elements set out by the Appellate Body in *Canada – Aircraft*.[3196] In particular, the European Communities has not proven that (i) there was a granting of a "subsidy" (ii) tied to (iii) actual or anticipated exportation or export earnings.

7.1497 In relation to element (ii), namely the required "tie", the United States notes that in *Canada – Aircraft* the Appellate Body held that the ordinary meaning of "tied to" is to "limit or restrict as to … conditions" and that a relationship of "conditionality" or "dependence" between subsidy and export performance must be demonstrated. Further, the Appellate Body held that the "tie" is at the very heart of the legal standard in footnote 4.[3197]

7.1498 The focus of the United States' arguments against the European Communities' Article 3 claim is that the European Communities has not demonstrated the required "tie". In this regard, the United States submits that the fact that HB 2294 was tied to the siting of a facility in Washington with the "capacity" to produce thirty-six superefficient airplanes does not establish the relevant "tie".[3198] The United States contends that the European Communities' legal burden is to establish that, while as a legal matter the provision of the tax treatment in HB 2294 was tied to nothing more than production capacity, in fact the tie was to anticipated exportation or export earnings. The United States argues that the European Communities has not met this burden.[3199] It notes that the European Communities equates a tie to production capacity with a tie to export sales on the basis that Boeing will fully utilize its production capacity and that this will result in export sales due to the level of demand in the domestic market. However, the United States emphasizes that in making these arguments, the European Communities relies on mere assumptions and assertions that are not substantiated with adequate evidence.[3200] In fact, the United States argues that the domestic market is capable of absorbing thirty-six planes annually and it refers to past orders for 787s by customers located in the United States to support this assertion.[3201]

7.1499 In its first written submission the United States repeatedly highlights that HB 2294 is contingent on a requirement to build a facility with a *capacity* to produce thirty-six aircraft, rather than a requirement that Boeing *actually produce* thirty-six aircraft.[3202] However, in its answers to Panel questions the United States clarifies that its argument is not based upon the lack of an *express requirement* to export. Rather, the European Communities' claim fails because of the absence of *any* tie, whether in the form of an express requirement or some other form, between the granting of the alleged subsidies and actual or anticipated exportation.[3203]

[3195] United States' comments on European Communities' response to question 56, para. 189. The "second legal argument" refers to the second argument identified by the European Communities in its response to question 56 and which is included in the summary of arguments at para. 7.1490 of this Report.

[3196] Where the "second and third legal arguments" refer to the second and third arguments identified by the European Communities in its response to question 56 and which are included in the summary of arguments at para. 7.1490 of this Report.

[3197] United States' first written submission, para. 692.

[3198] United States' first written submission, para. 696.

[3199] United States' response to question 55, para. 159.

[3200] United States' second written submission, para. 154 and United States' response to question 54, para. 153.

[3201] United States' second written submission, para. 155.

[3202] United States' first written submission, paras. 688 and 697-698.

[3203] United States' comments on European Communities' response to question 54, paras. 176-178.

7.1500 Further, in contrast to the European Communities' assertion, the United States does not argue that the Boeing facility in Everett will stand idle. The United States contends that a finding that the tax measures under HB 2294 are not export contingent subsidies does not rest upon such a proposition.[3204] Rather, the Article 3 claim must fail because a requirement to establish production capacity is an insufficient basis to conclude that HB 2294 is tied to anticipated exports.[3205]

7.1501 In relation to a tie to "anticipated" exportation, the United States contends that even if the State of Washington expected that Boeing would export some of the airplanes manufactured in the final assembly facility cited in HB 2294, the European Communities has not demonstrated that the granting of the HB 2294 tax incentives were tied to this anticipation.[3206] It has not demonstrated that the expectation of exports was the condition upon which the alleged subsidies were granted.

7.1502 In this regard, in relation to the element (iii) identified by the Appellate Body in *Canada – Aircraft,* namely the "actual or anticipated exportation or export earnings", the United States submits that the correct interpretation of "anticipated" was established by the Appellate Body in *Canada – Aircraft* and is "expected" and not "future", as suggested by the European Communities.[3207] It is exportation that is expected to occur but may or may not actually occur.[3208] Further, it is the United States' position that "actual" means "real" and not past, as suggested by the European Communities. It is exportation that has occurred or will in fact occur in the future.[3209]

7.1503 The United States notes that in answer to a Panel question regarding whether the European Communities argues that the subsidies are contingent upon "actual" or "anticipated" exportation, the European Communities "cobbles together another enumerated list of possible arguments" and it does this "in order to be certain that it has made all necessary arguments".[3210] The United States submits that it is unclear what it means for a party to assert arguments in order to be certain that it has made all the necessary ones. The European Communities either has a legal and factual basis for asserting a claim or it does not. In any event, the list of arguments is nonsensical and when the European Communities attempts to explain them, it admits that its explanations "do not exhaust all alternative arguments".[3211] The United States alleges that the European Communities is identifying arguments in extremely cursory terms and imposing upon the Panel the burden of supporting such arguments with legal reasoning. The United States notes that the Appellate Body has previously refused to rule on a "conditional appeal" by the European Communities that "did not set out any specific arguments to support {the} appeal".

7.1504 The United States argues that the assertions made by the European Communities that exports of 787s were "anticipated", in the sense that they were "expected", is based on mere assertion and not supported by any evidence.[3212] Further, the United States contends that the evidence referred to by the European Communities to establish that the grantor of the subsidies was aware of the capacity of the United States' market is not sufficient. Even if it were, awareness on the part of the grantor of the capacity of the United States' market does not establish that the grantor anticipated exports or that there was a tie between any such anticipation and the granting of the alleged subsidies.[3213]

[3204] United States' response to question 54, para. 154.
[3205] United States' response to question 54, para. 154.
[3206] United States' first written submission, para. 698.
[3207] United States' first written submission, para. 693.
[3208] United States' comments on European Communities' response to question 57, para. 196.
[3209] United States' comments on European Communities' response to question 57, para. 196.
[3210] United States' comments on European Communities' response to question 57, para. 194.
[3211] United States' comments on European Communities' response to question 57, para. 195.
[3212] United States' comments on European Communities' response to question 57, para. 197.
[3213] United States' comments on European Communities' response to question 267.

7.1505 Finally, the United States requests that the Panel ignore the "reference interpretation" advanced by the European Communities. This is because the reference interpretation does nothing to elucidate the claims in the dispute. It merely makes veiled references to claims in other disputes, asserts arguments that the European Communities admits it is not making and misstates the legal standard for export contingency.[3214]

(e) Arguments of third parties

(i) Australia

7.1506 Australia advances arguments regarding the correct interpretation of Article 3.1(a) but does not take a position on whether HB 2294 is contingent in fact upon export performance.[3215] In particular, Australia recalls that according to the Appellate Body's finding in *Canada – Aircraft*, three elements must be established in order to prove that a subsidy is contingent in fact upon export performance, namely that (i) the grant of a subsidy (ii) is "tied to" (iii) actual or anticipated exportation or export earnings.[3216]

7.1507 Australia notes that in establishing the second element, namely the "tie", the relationship of contingency "must be inferred from the total configuration of the facts constituting and surrounding the granting of the subsidy, none of which on its own is likely to be decisive in any given case".[3217] In Australia's view, such relevant facts could include an analysis of the nature of the product; the design and form of the subsidy; the export propensity of the product; performance requirements or conditions attached to the granting of the subsidy, which could include a requirement to establish a specified production capacity; any distinction between domestic and export sales in relation to repayment requirements of a loan; the level of sales requirements relative to domestic demand; and official statements of the government indicating the intention behind the granting of the subsidy.[3218]

7.1508 According to Australia, the capacity requirement included in HB 2294, considered in the light of estimated demand for the product in the domestic and export markets, is one relevant factor to consider in determining if the grant of the subsidy was "tied to" export performance. However, it is not conclusive of the issue.[3219] Similarly, the export orientation of the recipient of the subsidy is one of several facts that may be considered in determining if a subsidy is contingent upon exports but it cannot be the only fact in support of a finding of export contingency.[3220]

(ii) Canada

7.1509 According to Canada, a subsidy is contingent upon export performance if its grant was tied to or made conditional upon an incentive or requirement to export.[3221] Canada argues that this view is consistent with the reference to export subsidies under Article XVI of the GATT 1994, namely subsidies granted "on the export of any product". In Canada's view, the phrase "on the export" implies a "close connection between the act of exporting and the act of granting a subsidy so as to create a clear incentive to export". Canada argues that where the same terms are used in GATT 1994 and the SCM Agreement they should be read harmoniously where possible.[3222]

[3214] United States' comments on European Communities' response to question 270, para. 472.
[3215] Australia's response to question 15.
[3216] Australia's written submission, para. 59.
[3217] Australia's written submission, para. 62, quoting the Appellate Body, *Canada – Aircraft*, para. 167.
[3218] Australia's written submission, para. 63.
[3219] Australia's written submission, paras. 59 and 61.
[3220] Australia's response to question 16.
[3221] Canada's response to question 16, para. 20.
[3222] Canada's response to question 16, para. 22.

7.1510 As context for the interpretation of Article 3.1(a) of the SCM Agreement, Canada also relies upon the draft definition proposals for "export subsidy" canvassed during the Tokyo Round. Although the proposals it relies upon were not ultimately adopted, Canada argues that they demonstrate that the concept of differential treatment of exports over products destined for domestic consumption was central to the negotiators of the Round. Canada knows of no evidence that the language in Article 3.1(a) was designed to negate this notion of differential treatment.[3223] Canada also notes that all of the subsidies in the Annex I Illustrative List of Subsidies are either expressly contingent upon exports or differentially benefit exported products over products destined for domestic consumption. The complete absence from the list of any subsidy that is neutral in terms of market orientation provides context for the interpretation of Article 3.1(a) of the SCM Agreement.[3224]

7.1511 In short, in Canada's view, the absence of an incentive or a requirement to export as a condition precedent to the granting of a subsidy means that the subsidy is not export contingent.[3225] Applying this interpretation, Canada argues that the European Communities' reliance upon the capacity condition in HB 2294 falls well short of establishing export contingency. The capacity condition does not require Boeing to make a single export sale or sell more than it otherwise would have in export markets. It does not provide any incentives that could have the effect of distorting Boeing's market orientation in favour of exports.[3226] Canada concludes that "a contingency that can be satisfied without a single export sale (or a sale of any kind) and where the resulting subsidy continues to be provided even if no export sales materialize is an unlikely instrument for promoting exportation or export earnings.[3227] According to Canada, the "more compelling explanation" for the capacity condition in HB 2294 is that Washington State wanted to retain aerospace manufacturing and was not willing to accept a mere token facility. Canada notes that in any event, "inferring intent can be a highly subjective matter, particularly when the intentions at issue are those of a government".[3228]

(iii) Korea

7.1512 According to Korea, in order to demonstrate that the requisite "tie" exists in establishing export contingency, it is necessary to prove that the subsidy would *not* have been granted *but for* anticipated exportation or export earnings.[3229] Korea notes that the simple fact that Boeing exports many of its airplanes should not be the legal standard for determining whether an export contingent subsidy exists.[3230] The European Communities must prove that the benefit would not have been granted to Boeing if the United States Government had known that no export sales may ensue from the programme.[3231] Korea concludes that "the Panel should not simply look at the export potential or export sales of Boeing; instead it should evaluate the evidence provided by the EC as a whole, and look into the very nature of the HB 2294".[3232]

(f) Evaluation by the Panel

7.1513 The issue before us is whether the tax measures under HB 2294 constitute subsidies contingent upon export performance under Article 3.1(a) of the SCM Agreement, which provides:

[3223] Canada's response to question 16, paras. 23-24.
[3224] Canada's response to question 16, para. 25.
[3225] Canada's response to question 16, para. 25.
[3226] Canada's written submission, para. 45.
[3227] Canada's written submission, para. 46.
[3228] Canada's written submission, para. 47.
[3229] Korea's written submission, para. 42.
[3230] Korea's written submission, para. 38.
[3231] Korea's written submission, para. 43.
[3232] Korea's written submission, para. 43.

BCI deleted, as indicated **[***]**

> "3.1 Except as provided in the Agreement on Agriculture, the following subsidies, within the meaning of Article 1, shall be prohibited:
>
> (a) subsidies contingent, in law or in fact[4], whether solely or as one of several other conditions, upon export performance, including those illustrated in Annex I[5] ..."
>
> ---
>
> [4] This standard is met when the facts demonstrate that the granting of a subsidy, without having been made legally contingent upon export performance, is in fact tied to actual or anticipated exportation or export earnings. The mere fact that a subsidy is granted to enterprises which export shall not for that reason alone be considered to be an export subsidy within the meaning of this provision.
>
> [5] Measures referred to in Annex I as not constituting export subsidies shall not be prohibited under this or any other provision of this Agreement."

7.1514 The European Communities' claim is that HB 2294 is de facto contingent upon export performance. In response to an explicit Panel question regarding how many legal arguments it is making, the European Communities advances three arguments. Therefore, we treat the three arguments there outlined as the only three arguments the European Communities advances.[3233]

(a) HB 2294 is de facto contingent upon export performance because the B&O tax reduction, an *ad valorem* subsidy, is contingent upon sales, including export sales. The European Communities asserts that the grant of the subsidy is tied to "actual" or "anticipated" exportation.

(b) HB 2294 is de facto contingent upon export performance because its grant was conditioned upon establishment of a facility with the capacity to produce thirty-six superefficient airplanes. The subsidies are tied to "actual" or to "anticipated" exportation. The relevant legal test requires some element of "favouring" of exports.

(c) The final legal argument is the same as that outlined in (b) above, except that no element of "favouring" of exports need be proven.

7.1515 Although in its second written submission the European Communities asserts that "the United States effectively admitted that the HB 2294 B&O tax rate reductions are subsidies contingent *in law*… upon export performance", nowhere else in its submissions does the European Communities refer to HB 2294 as export contingent in law. In response to a specific question from the Panel regarding how many legal arguments it is making in support of its claim that the subsidies are contingent in fact upon export performance, the European Communities does not assert that it is also advancing legal arguments to support a claim that the subsidies are contingent *in law* upon export

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[3233] As indicated at footnote 3182 of this Report, in its first oral statement the European Communities describes its "primary argument" in support of export contingency. The argument is that HB 2294 acts as a "filter", with the result that the defining characteristic of the companies that are eligible for the subsidy is that they contribute to a product that will necessarily be exported. As indicated in footnote 3182 of this Report, it is not clear that this is a separate legal argument, rather than reasoning in support of its other legal arguments. For completeness, we note that if this is intended to be a separate legal argument, it is not a strong one. The argument essentially amounts to a contention that the taxation subsidies are export contingent simply because all of the enterprises to which the subsidies are granted make products that will ultimately be exported. It is clear from the final sentence in footnote 4 to Article 3.1(a) that such an argument cannot support a finding of *de facto* export contingency.

performance. Therefore, it is reasonable to conclude that the European Communities' claim relates only to de facto export contingency.

7.1516 Before addressing each of the European Communities' arguments in this case, it is useful to review the way in which Article 3.1(a) of the SCM Agreement has been interpreted in adopted panel and the Appellate Body reports.

7.1517 The Appellate Body interpreted Article 3.1(a) in the context of a de facto export contingency claim in *Canada – Aircraft*.[3234] Both the panel and the Appellate Body held that the evidence demonstrated that the grant of the subsidy was tied to anticipated exportation and therefore was a subsidy contingent upon export performance. The subsidy programme in issue was the Technology Partnerships Canada ("TPC"), which involved the provision of financing for high-technology projects in the Canadian regional aircraft sector. The repayment terms were such that the recipients of the financing were only required to make repayments if they made sales.

7.1518 In interpreting Article 3.1(a), the Appellate Body stated that the "key word" in the provision is "contingent", which means "conditional" or "dependent for its existence on something else".[3235] The Appellate Body noted that *de jure* and de facto contingency are subject to the same legal standard under Article 3.1(a). However, the evidence used to prove each type of contingency is different. Whereas *de jure* contingency is established on the basis of the terms of the relevant legislation or legal instrument, proof of de facto export contingency is "a much more difficult task".[3236] De facto export contingency must be inferred from the "total configuration of facts constituting and surrounding the granting of the subsidy, none of which on its own is likely to be decisive in any case".[3237] The Appellate Body noted that the export-orientation of the recipient could be considered as *a* relevant fact, but could not be the sole fact supporting a finding of export contingency.[3238]

7.1519 The Appellate Body indicated that the satisfaction of the standard for determining de facto export contingency, as set out in footnote 4 to Article 3.1(a), requires proof of three different elements, namely (i) the granting of a subsidy (ii) tied to (iii) actual or anticipated exportation or export earnings.[3239]

7.1520 According to the Appellate Body, the second element, namely "tied to", indicates that a relationship of "conditionality or dependence" must be demonstrated and this second element "is at the very heart of the legal standard in footnote 4".[3240] The Appellate Body equated "tied to" with "contingent upon". It distanced itself from the "but for" test which the Panel had applied in determining if the grant of the subsidy was tied to anticipated exports. The panel had reasoned that the claimant was required to demonstrate that, "but for" the expectation of export sales ensuing from the subsidy, the subsidy would not have been granted. To the panel, this was an effective indicator of a "strong and direct link" between the granting of the subsidy and the creation or generation of export sales.[3241] However, the Appellate Body held that, while the panel was not in error in its overall approach, it was necessary to interpret and apply the language actually used in the treaty, rather than applying a "but for" test.[3242]

[3234] Appellate Body Report, *Canada – Aircraft*.
[3235] Appellate Body Report, *Canada – Aircraft*, para. 166.
[3236] Appellate Body Report, *Canada – Aircraft*, para. 167.
[3237] Appellate Body Report, *Canada – Aircraft*, para. 167.
[3238] Appellate Body Report, *Canada – Aircraft*, para. 173.
[3239] Appellate Body Report, *Canada – Aircraft*, para. 169.
[3240] Appellate Body Report, *Canada – Aircraft*, at 171.
[3241] Panel Report, *Canada – Aircraft*, para. 9.339.
[3242] Appellate Body Report, *Canada – Aircraft*, para. 171, footnote 102.

BCI deleted, as indicated **[***]**

7.1521 In relation to the third element, the Appellate Body held that "anticipated" means "expected".[3243] Whether exports were expected at the time of the grant of the subsidy needs to be gleaned from an examination of objective evidence. The Appellate Body emphasized that the second and third elements are distinct enquiries. It is not sufficient to demonstrate that a subsidy was granted with the anticipation that exports would result.[3244] It is necessary to prove that the granting of the subsidy was *tied to* the anticipation of exportation. The Appellate Body stated that this is emphasized by the second sentence of footnote 4, which provides that a finding of export contingency cannot be based solely on the fact that it is "granted to enterprises which export". Merely knowing that a recipient's sales are export-oriented does not demonstrate, without more, that the granting of a subsidy is tied to actual or anticipated exports.[3245]

7.1522 The Appellate Body agreed with the panel's finding, based on sixteen different factual elements, that the TPC assistance was "contingent … in fact … upon export performance", on the basis that the grant of the TPC assistance was tied to anticipated exportation. In reaching this conclusion, the sixteen factual elements relied upon by the Panel in finding that the necessary "tie" existed were that:

- the Canadian aerospace sector *exported a large proportion of its output*, due to the small size of the Canadian domestic market;

- the TPC Business Plan noted that TPC's "approach" in the aerospace and defence sector was to "{d}irectly support the near market R&D projects *with high export potential*";

- section 3.2.3 of the "Terms and Conditions" set forth in the TPC Interim Reference Binder stated that "TPC will provide contributions to specific industrial development projects in order to enable Canadian Aerospace and Defence Industries *to compete fairly and openly on the world competitive stage*";

- the Industry Minister's Message, which was included in the 1996-1997 TPC Annual Report, stated:

  > "Aerospace and defense also make a significant contribution to our economic wellbeing. The sector is highly export oriented. Exports accounted for about 70 percent of sales, or $7.4 billion, in 1995. And there is the prospect of real growth in this area. Canada's aerospace sector currently ranks sixth in the world. *With investments from TPC*, and with industry's concerted efforts, *this sector* will be better equipped to compete effectively in the world marketplace and *could grow to fourth place*";

- the TPC Annual Report stated that "{t}he 12 largest firms {in the aerospace and defence sector} account for most of the R&D and shipments, *of which 80 percent are exported*. … TPC is proud to be an investment partner in this *export-oriented* success story";

- an Industry Canada press release, issued in respect of the $100 million TPC contribution to a specific firm, quoted Industry Minister Manley as stating "{A}erospace is a critical sector for Canada's economy, with exports growing at a rate of 10 per cent per year. *TPC's investment* in these projects will help increase the global competitiveness of this industry, while supporting jobs in Montreal, in Halifax and across the country, *generating economic growth and export dollars*";

[3243] Appellate Body Report, *Canada – Aircraft*, para. 172.
[3244] Appellate Body Report, *Canada – Aircraft*, para. 172.
[3245] Appellate Body Report, *Canada – Aircraft*, para. 173.

- concerning the $57 million contribution to a firm for the development of the Dash 8-400, the Leader of the Government in the House of Commons and then-Solicitor General of Canada, stated that "{t}hese two outputs of the Dash 8-400 project -- the creation of jobs and the *building of exports -- are just what the government had in mind when we established Technology Partnerships Canada earlier this year*";

- TPC website material stated that "TPC approved projects are forecasted to *generate sales* of more than $65 billion (*mostly exports*) and create or maintain 13,166 direct and indirect jobs";

- the TPC Applications Kit required applicants to describe "potential broad economic and social benefits, such as: job creation and retention, *increased exports*, new investment…". The Applications Kit also stated that TPC "*invests in projects* that have the potential to create jobs, *generate exports*, launch new industries, and transform or strengthen the competitiveness of industry";

- according to the TPC Interim Reference Binder, the TPC Aerospace and Defence Sector Generic Model Agreement required applicants *to distinguish between domestic sales and exports* when reporting forecast and actual sales;

- the TPC Interim Reference Binder required TPC employees, when completing Project Summary Forms, to explain the reasons for recommending support or rejection of the project. In particular, employees were given the following instructions:

  "Strategic Considerations, Benefits, Indicators

  In justifying the recommendation in strategic terms emphasise "business results". The following may be considered:

  1. Link the project with departmental strategies and priorities as relevant:

     a) Improvement of international competitiveness; *when sales will result directly from the project, report annual sales in terms of domestic and export sales* and any import replacement";

- the "Terms and Conditions" set forth in the TPC Interim Reference Binder stated that TPC will "fill a financial void … where government action is *required to level the competitive playing field*, at the near-market end of the spectrum"; and that "{c}ontributions under the Aerospace and Defence component will be directed to projects that will maintain and build upon the technological capabilities and production, employment and *export base* extant in the aerospace and defence sector";

- Industry Canada website material concerning TPC "Application information" stated that one factor considered by TPC in determining the need for federal government involvement was whether assistance was required to *level the playing field against international competitors*;

- the TPC Charter stated that "{i}nvestments will be directed to projects that build on and maintain technological capabilities and the production, employment and *export base* of the sector";

- the TPC Business Plan recorded the proportion of the aerospace and defence industry's *revenue allocable to exports*; and

- the TPC contributions identified by Brazil were for the development of specific products, and were provided expressly on the basis of the projected *sales* of those products, the market for which was known to be almost entirely outside Canada; the statistics maintained by TPC, and the public statements about TPC, separately recount, and emphasize, the amount of export sales "generated" by these contributions. [3246]

7.1523 On the basis of this evidence, the panel in *Canada – Aircraft* concluded that the TPC funding was expressly designed and structured to generate sales of particular products, and that the Canadian Government expressly took this into account, and attached considerable importance to, the proportion of those sales for export, when making TPC contributions in the regional aircraft sector. On this basis, the panel concluded that the subsidy was tied to anticipated exportation or export earnings.[3247]

7.1524 In *Australia – Automotive Leather II,* the panel also concluded that the grant of one of the subsidies in issue was contingent in fact upon export performance on the basis that it was tied to anticipated exportation.[3248] The measure was a grant contract between a producer of automotive leather, Howe, and the Australian Government. The contract provided for a series of three grant payments to Howe. The first payment was made immediately after conclusion of the contract, while the other two were to be made on the basis of Howe's performance against sales targets set out in the contract. Under the contract, Howe was required to use its best endeavours to meet the targets.[3249]

7.1525 The panel held that the terms "contingent" and "tied to", mean "conditional" and require a "close connection" between the grant of the subsidy and export performance.[3250]

7.1526 The panel ultimately concluded that the grant contract was contingent in fact upon export performance because there was a close tie between anticipated exportation and the grant of the subsidies. In reaching this decision, the panel relied upon the following evidence:

- At the time the contract was granted, Howe exported a significant proportion of its production and the Australian Government was aware of this.[3251] In enacting the programme, there was evidence to suggest that the Australian Government was concerned to ensure that Howe remained in business, after losing funding from another government programme. The panel concluded that, in these circumstances, it was clear that anticipated exportation was an important condition in the provision of the assistance. In reaching this conclusion, the panel noted that it was not prohibited from considering the fact that Howe was an exporter. However, this could not be the sole basis for its decision.[3252]

- In order to meet the sales performance targets, Howe would have had to continue, and perhaps increase, its exportation because the Australian market was too small to absorb the level of production set by the targets. Therefore, the sales performance targets were effectively export performance targets.[3253] The Australian Government was aware of this at the time of granting the subsidy and therefore anticipated continued and perhaps increased

[3246] Panel Report, *Canada – Aircraft*, para. 9.340.
[3247] Panel Report, *Canada – Aircraft*, para. 9.341.
[3248] Panel Report, *Australia – Automotive Leather II*.
[3249] Panel Report, *Australia – Automotive Leather II*, para. 2.3
[3250] Panel Report, *Australia – Automotive Leather II*, para. 9.55.
[3251] Panel Report, *Australia – Automotive Leather II*, para. 9.66.
[3252] Panel Report, *Australia – Automotive Leather II*, para. 9.66.
[3253] Panel Report, *Australia – Automotive Leather II*, para. .9.67

exports by Howe. Therefore, Howe's anticipated export performance was one of the conditions for the grant of the subsidy.[3254]

- The subsidy was provided only to Howe, the only *exporter* of automotive leather. It was not provided to producers who supplied only the domestic market.[3255]

- At around the same time as the Australian Government entered the grant contract, a settlement was reached between Australia and the United States which required Australia to remove automotive leather from eligibility for two particular programmes. The panel in *Australia - Automotive Leather II* found that the two programmes gave "incentives to Australian companies to export certain products". Further, "Howe earned significant benefits from its exports of automotive leather pursuant to those programmes" (although the programmes were not challenged before any dispute settlement panel). The panel reasoned that the Government of Australia entered into the grant contract at least in part to tide Howe over after it had lost eligibility for benefits under those programmes.[3256]

7.1527 As well as challenging the grant contracts, the United States also alleged that a certain loan contract between Howe and the Australian Government was a subsidy tied to anticipated exportation. The panel found that this measure was not export contingent.

7.1528 The measure in issue was a 15-year preferential loan to Howe, which was secured over the assets of the parent company of Howe (ALH).[3257] Although Howe was a highly export oriented company, and despite the fact that it was likely that some of the money to repay the loan would be generated through export sales, the panel found that the element of contingency between the grant of the loan and export performance was not sufficiently established. Important in the panel's conclusion were the following factors:

- there was "nothing in the loan contract that explicitly linked the loan to Howe's production or sales, and therefore nothing in its terms, the design of the loan payment, or the repayment provisions to tie the loan directly to export performance, or even sales performance".[3258]

- it was ultimately up to Howe and its parent company to decide upon the source of funds to be used to repay the loan. The source of funding to repay the loan would not necessarily be export sales and there was nothing to suggest that it was expected at the time the loan contract was entered into that export sales would generate the funds to repay the loan.[3259]

- the loan was secured by a lien on the assets and undertakings of Howe's parent company, ALH, which was ultimately responsible for repayment of the loan. ALH had other businesses and produced other products from which it could generate the funds to repay the loan.[3260]

7.1529 Thus, in *Australia – Automotive Leather II*, the panel found that the Australian Government's loan to a company whose commercial viability was dependent upon exports was, because of its particular terms, not contingent upon export performance.

[3254] Panel Report, *Australia – Automotive Leather II*, para. 9.67.
[3255] Panel Report, *Australia –Automotive Leather II*, para. 9.69.
[3256] Panel Report, *Australia –Automotive Leather II*, paras. 9.63-9.65.
[3257] Panel Report, *Australia –Automotive Leather II*, para. 9.73.
[3258] Panel Report, *Australia –Automotive Leather II*, para. 9.73.
[3259] Panel Report, *Australia –Automotive Leather II*, para. 9.75.
[3260] Panel Report, *Australia –Automotive Leather II*, para. 9.75.

BCI deleted, as indicated **[***]**

7.1530 From the preceding overview of adopted reports we gain guidance from the Appellate Body regarding the way in which de facto export contingency must be demonstrated. In particular, proof of three elements is required, namely (i) the granting of a subsidy (ii) tied to (iii) actual or anticipated exportation or export earnings. At least in its first written submission, the European Communities argues that establishing that a subsidy is de facto contingent upon exports involves consideration of (i) the required condition (export performance); (ii) the required consequence (grant of a subsidy); and (iii) the required contingent relationship (between the grant of the subsidy and the export performance). The submissions of the European Communities in this regard amount to a restatement of Article 3.1(a), namely that the grant of a subsidy must be contingent upon export performance. The United States does not contest that this must be the case and nor does the European Communities suggest that the elements listed by the Appellate Body in *Canada – Aircraft*, which set out the criteria established by footnote 4 for demonstrating de facto contingency, are inapplicable. Therefore, in considering whether the European Communities has established on the evidence that HB 2294 is contingent in fact upon export performance, we follow the structure used by the Appellate Body in *Canada – Aircraft*, namely we consider in turn each of the three elements drawn from footnote 4.

7.1531 Before addressing the legal arguments made by the European Communities, we recall in relation to the first element listed by the Appellate Body in *Canada – Aircraft*, namely the requirement to demonstrate that a subsidy has been granted, that we have concluded that certain taxation subsidies have been granted under HB 2294.[3261] Therefore, in analyzing each of the legal arguments of the European Communities, we need consider only the remaining two elements, namely whether the granting of the subsidy was tied to actual or anticipated exportation.

7.1532 In considering whether the granting of the subsidy was tied to anticipated exportation, the Appellate Body cautioned in *Canada – Aircraft* that this requires two distinct enquiries, namely whether there was *anticipated exportation* and whether this anticipated exportation was *tied to* the grant of the subsidy.

7.1533 In its claim regarding "anticipated exportation", the European Communities does not take a position on the meaning of "anticipated". In contrast, the United States submits that "anticipated" means "expected" and not "future" as suggested in the European Communities' "reference interpretation". In this regard, we note that the Appellate Body held in *Canada – Aircraft* that the "dictionary meaning of the word 'anticipated' is 'expected'". The European Communities does not advance any arguments regarding why this Panel should take an approach to the meaning of "anticipated" that is different to that taken by the Appellate Body. In *Australia – Automotive Leather II* and *Canada – Aircraft*, whether or not there was "anticipated exportation" was considered from the point of view of the grantor of the subsidy and the relevant enquiry was whether the granting authority expected exports to ensue or arise out of the granting of the subsidy.[3262] However, the Appellate Body cautioned that it is not sufficient to demonstrate that a subsidy is granted in the knowledge, or with the expectation, that exports will result. Something more is required in order to demonstrate that the grant of the subsidy is "tied to" the anticipated exports.

7.1534 In relation to each of its legal arguments, the European Communities' argues that the "tie" may also be to "actual exportation".[3263] The previous cases discussing de facto export contingency have all been cases in which the claim was that the grant of the subsidy was tied to "anticipated", rather than to "actual" exports. Therefore, the Panel has little guidance regarding the correct

[3261] See para. 7.302 of this Report.

[3262] For example, the Panel in *Canada – Aircraft* referred to an expectation of export sales "ensuing from the subsidy", while the Appellate Body in the same case referred to a subsidy granted "with the anticipation that exports *will result*" (para. 172).

[3263] See European Communities' response to question 57, para. 195.

interpretation of "actual" exportation. The European Communities does not take a position on the meaning of the term "actual" in footnote 4. In its "reference interpretation", which it does not advance, the European Communities suggests that "actual" means "already existing or in the past". In contrast, the United States' position is that "actual" means "real" and does not mean "past". According to the United States, the Spanish and the French versions of the text of the SCM Agreement confirm this interpretation.[3264]

7.1535 We note that in *Canada – Aircraft*, in dismissing Canada's submission that the subsidy was not contingent upon anticipated exportation because the subsidy was "not conditional on exports taking place" and because there were no "penalties if export sales {were} not realized", the panel held that while this argument may have been relevant in determining if the subsidy was tied to *actual* exportation, it was not sufficient to rebut a prima facie case that the subsidy was tied to *anticipated* exportation.[3265] This suggests that, in that panel's view, "actual" exportation is exportation that must be realized or that must actually occur. This approach to the interpretation of "actual" exportation is supported by the ordinary meaning of the term, which is "existing in act or fact; real" and "in action or existence at the time, present; current".[3266] This is opposed to "anticipated" exportation, which is expected but may or may not in fact take place.

7.1536 Having interpreted the meaning of "actual" and "anticipated" exportation, this brings us to the more difficult question of the meaning of "tied to" anticipated exports. The terms of footnote 4 do not provide specific guidance regarding the meaning of "tied to" or the manner in which such a "tie" should be demonstrated. In *Canada – Aircraft*, the Appellate Body held that it is necessary to demonstrate a relationship of "conditionality or dependence". The panels in *Australia – Automotive Leather II* and *Canada – Aircraft* refer variously to a "close tie", a "but for" test, a "strong and direct link" and an "important condition". In its second and third legal arguments the European Communities adopts an interpretation of "tied to" that it contends the United States advocates "elsewhere". In particular, the European Communities argues that a "tie" exists where it can be shown that the expectation of exports was a part of the consideration or motivation or intent of the government in providing the subsidy.

7.1537 In the Panel's view, a "tie" exists where a subsidy is granted *because of* the granting authority's expectation of exports. In circumstances where a contingent relationship between the grant of a subsidy and export performance is not explicit on the face of the relevant legislation, which is the very nature of a de facto export contingency claim, to determine whether the grant of the subsidy was dependent upon the expected exports requires a determination of whether the subsidy was granted because of the granting authority's expectation of exports.

7.1538 We acknowledge that establishing the existence of the "tie" under footnote 4 of Article 3.1(a) by determining whether the subsidy was granted because of the granting authority's expectation of exports could be considered problematic in some respects. The interpretation could lead to the result that two subsidy programmes, which may operate identically and have the same distorting effect in the market, may not necessarily be subject to the same finding regarding de facto export contingency under Article 3.1(a), where the evidence differs regarding the government's reasons in providing the subsidy. Further, in some circumstances, establishing the necessary "tie" through a focus on the reasons for the grant of the subsidy may make circumvention of Article 3.1(a) relatively easy. For example, in *Canada – Aircraft*, the panel and the Appellate Body found that the subsidies in issue were tied to anticipated exportation. Part of the evidence to support this finding included statements

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[3264] United States' comments on European Communities' response to question 54, para. 172.

[3265] Panel Report, *Canada – Aircraft*, para. 9.343.

[3266] *Shorter Oxford English Dictionary*, L. Brown (ed.) (Clarendon Press, 1993), Vol. I, p. 23. It is also supported by the ordinary meaning of the term in *Webster's New Encyclopedic Dictionary*, (Könemann, 1993), p. 11, namely "existing in fact" and "really ... carried out".

in programme documents to the effect that the programme was expected to result in increased exports.[3267] Perhaps an approach that considers the reasons for the grant of the subsidy may encourage governments to be more discrete without necessarily changing their underlying policies. Nevertheless, despite these issues, the Panel is of the view that to determine whether a "tie" exists between the grant of a subsidy and the grantor's expectation of exports, it is necessary to determine whether the subsidy was granted because of the expectation of exports.

7.1539 Before considering the three legal arguments of the European Communities[3268], the Panel notes that in relation to each argument the European Communities refers to a possible requirement under Article 3.1(a) to demonstrate that a subsidy "favours" exports or is greater in the case of exports.[3269] The European Communities' primary position, as enunciated in its first written submission, is that such a requirement does exist. However, the European Communities notes that the United States has "elsewhere" expressed the view that there is no requirement to demonstrate "favouring" and the European Communities adopts this as its alternative position (in its first and third legal arguments).[3270] In its first written submission, the European Communities discusses "favouring" of exports in relation to the requirement under Article 3.1(a) that the subsidy in issue be contingent upon *export* performance and not mere performance. The European Communities then refers to evidence that it alleges demonstrates "a favouring or discrimination in favour of a product that will inevitably be generally exported or incorporated within an exported product".[3271] The European Communities makes similar arguments in its "reference interpretation", which it does not advance, where it notes:

> "Finally, according to the terms of both Article 3.1(a) and footnote 4, the prohibited condition relates to "*export* performance", not mere performance. For a claim to be successful, the evidence must therefore support the conclusion that there is a grant of a subsidy contingent upon specifically export performance. This will generally involve demonstrating some *favouring* of exports. Demonstrating the existence of a measure contingent upon mere performance is insufficient."[3272]

7.1540 To the extent the European Communities is arguing that there is a requirement to demonstrate that a subsidy is contingent upon *export* performance under Article 3.1(a), this should be accepted as there is no basis to read the term "export" out of Article 3.1(a). Export contingency is the very concern addressed by Article 3.1(a) and this is confirmed by footnote 4, which refers to subsidies tied to actual or anticipated *exportation* or *export* earnings. As established by the Appellate Body in *Canada – Aircraft*, the relevant legal standard to meet to succeed in a claim of de facto export contingency is that (i) the grant of a subsidy (ii) is tied to (iii) actual or anticipated exportation or export sales. The Panel notes that it would be almost

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[3267] Panel Report, *Canada – Aircraft (Article 21.5 – Brazil)*.

[3268] Where the "three legal arguments of the European Communities" refers to the arguments identified by the European Communities in its response to question 56 and which are summarized at para. 7.1490 of this Report.

[3269] The European Communities' submission regarding the "favouring" of exports has some parallels with Canada's third party submission, in which Canada suggests that an export contingent subsidy must lead to the recipient of the subsidy selling more than it otherwise would have in export markets or must provide incentives that could have the effect of distorting Boeing's market orientation in favour of exports (Canada's written submission, para. 45). However, in response to Panel questioning, the European Communities takes the position that whether or not a subsidy provides an incentive that could have the effect of distorting the subsidy recipient's market orientation is immaterial to the analysis of whether a *de facto* export contingent subsidy exists (European Communities' response to question 269, para. 475).

[3270] See European Communities' first written submission, para. 980, footnote 1712.

[3271] European Communities' first written submission, para. 980.

[3272] European Communities' response to question 56, para. 189.

impossible to establish the necessary "tie" between a subsidy and actual or anticipated exports in circumstances where there were not some "favouring" of exports, where favouring does not necessarily mean differential treatment of exports compared with domestic sales, but also refers to granting a subsidy to a company because it is expected to export or will actually export.

(i) European Communities' first legal argument

7.1541 In its response to question 56, the European Communities contends that its "first legal argument" is based on the B&O tax reduction. In particular, according to the European Communities, the B&O tax rate reduction is an export contingent subsidy because it is an *ad valorem* subsidy. Therefore, it is a subsidy contingent upon sales, whether domestic or export sales. In pursuing this argument, the European Communities submits that there is "no need to demonstrate that the subsidy favours exports or is greater in the case of export".

7.1542 As previously indicated, to fall within the terms of Article 3.1(a), the grant of a subsidy must be "tied to" actual or anticipated exportation. However, any form of conditionality or dependence between the B&O tax reduction and exports arises simply because the recipient of the subsidy is an exporter. If this is the case, the B&O tax reduction is contingent upon either domestic or export sales. The European Communities does not make any other submissions regarding why the grant of the B&O tax reduction is "tied to" exportation. Therefore, it is clear that a "tie" between the B&O tax reduction and exportation arises simply because the subsidy is granted to an enterprise that exports. However, the final sentence of footnote 4 to Article 3.1(a) provides that the grant of a subsidy to an enterprise that exports "shall not for that reason alone be considered to be an export subsidy". Therefore, it is clear from footnote 4 that the standard for de facto export contingency is not met.

7.1543 For these reasons, the Panel finds that, based on its first legal argument, the European Communities has not demonstrated that HB 2294 is contingent upon export performance.

(ii) European Communities' second and third legal arguments

7.1544 The only difference between the European Communities' second and third legal arguments is that the second argument proceeds on the basis that it is necessary to demonstrate some element of "favouring" of exports in a de facto export contingency claim, while the third does not. As indicated previously, the relevant enquiry under Article 3.1(a) is whether there is a contingent relationship between the grant of the subsidy and *export* performance. It would be almost impossible to establish the necessary "tie" between a subsidy and actual or anticipated exports in circumstances where there were not some "favouring" of exports, where favouring does not necessarily mean differential treatment of exports compared with domestic sales, but also refers to granting a subsidy to a company because it is expected to export or will actually export. In the light of this, the remaining issue to be decided in relation to the second and third legal arguments is whether HB 2294 was tied to an "anticipating of exports" and is therefore a measure contingent upon export performance. Although this is the way in which the European Communities expresses the second and third legal arguments, which seems clearly to be an argument that the grant of the subsidies under HB 2294 was tied to *anticipated* exports, in response to a Panel question, the European Communities states that its second and third legal arguments are also arguments in relation to *actual* exports.[3273] Therefore, our analysis considers both a tie to anticipated exportation and to actual exportation.

[3273] European Communities' response to question 57.

BCI deleted, as indicated **[***]**

Grant of a subsidy in fact tied to *anticipated* exportation

7.1545 To determine whether HB 2294 was in fact contingent upon export performance, it is necessary to establish whether there was a (i) grant of a subsidy (ii) tied to (iii) anticipated exportation or export earnings. We have previously concluded that in enacting HB 2294, Washington State granted tax reduction, tax credit and tax exemption subsidies.

Whether the grantor of the subsidy anticipated exportation

7.1546 To demonstrate that the grantor of the subsidy anticipated exports, the European Communities presents a range of evidence. The evidence can broadly be described as evidence relating to the export orientation of Boeing and evidence regarding the capacity condition in HB 2294. The following sections of the Report summarize the evidence before the Panel and the final section draws a conclusion about whether the grantor of the subsidy expected exports to arise from the project benefiting from the subsidies, namely assembly of the 787.

Export Orientation of Boeing

7.1547 The European Communities provides a number of documents, including from the Decadal Survey of Civil Aeronautics, from Boeing and from the Aerospace Industries Association, which include statements that the United States aerospace industry has historically made a major contribution to a positive balance of trade for the United States economy.[3274] Further, the Boeing LCA division has played a major role in this regard, with an average of 60 per cent of total LCA sales between 1989-2005 being export sales.[3275] The European Communities also provides a transcript from a speech of the Lieutenant Governor of Washington, which includes a statement that Washington is the United States' most trade dependent state and that Boeing accounts for 50 per cent of the State's exports.[3276]

7.1548 In addition to the objective evidence regarding the export orientation of Boeing, the European Communities submits evidence regarding the awareness of the Governor of Washington of the export orientation of Boeing. In one of his speeches, the Governor states:

> "Now more than ever, we must aggressively capitalize on and protect our competitive advantage in trade… Expanding trade and pressing our state's many advantages is even more important as we strive to recover economically…
>
> "We must…do everything possible to keep our top companies here – including companies that strengthen our international trade. As you know, we are energetically pursuing Boeing 7E7 final assembly. Boeing has historically been a major exporter for our state and for our nation. We want to keep Boeing assembly and supplier jobs right here where they belong…

[3274] See European Communities' first written submission, paras. 981-982; Boeing Current Market Outlook 2006 (September 2006), Exhibit EC-635; Boeing Current Market Outlook 2003 (June 2003); Exhibit EC-636; Steering Committee for the Decadal Survey of Civil Aeronautics, National Research Council of the National Academies, Decadal Survey of Civil Aeronautics: Foundation for the Future, 2006, Exhibit EC-301; and Civil Aircraft Sales Fuel Record Year for Aerospace, Press Release, Aerospace Industries Association, 13 December 2006, Exhibit EC-639.

[3275] See European Communities' first written submission, para. 986 and International Trade Resources LLC, FSC/ETI Tax Benefits Provided to U.S. Large Civil Aircraft Producers, December 2006, Exhibit EC-12.

[3276] European Communities' first written submission, para. 982 and Speech by Lt. Governor Brad Owen, "Impact of Trade on the Regional Economy", National Forum on Trade Policy, 7 December 2006, Exhibit EC-637.

BCI deleted, as indicated **[***]**

> "Expanding international trade is part of my plan to create jobs." [3277]

7.1549 Further, a letter written by Governor Locke, entitled "Restatement of Commitments", is appended to the Master Site Agreement. The letter was submitted as a part of the offer by the State of Washington for the 787 manufacturing facilities to be located in Washington. The letter provides:

> "The recent trade mission I led to China is another example of how the state can play a beneficial and significant role in helping keep Boeing and other Washington companies competitive. I met with high-level government officials and airline executives for the purpose of promoting the purchase of Boeing airplanes." [3278]

7.1550 Finally, although not referred to in the European Communities' submissions regarding anticipated exportation, we note that Article 10.6.1 of the MSA provides:

> "Boeing's production and assembly of the 7E7 Aircraft is market-driven. The commercial aircraft market is *international* and highly competitive. Despite Boeing's extensive investments and good faith efforts to predict markets for the 7E7 Aircraft, Boeing cannot guarantee that those markets will materialize or be sustained as predicted or desired" (emphasis added).

The capacity condition

7.1551 To support its argument of export contingency, the European Communities variously submits that the requirement in HB 2294 that Boeing build a facility with the capacity to produce at least thirty-six superefficient airplanes per year amounted to a requirement to export or created an expectation of exports.[3279] To the extent the evidence of the European Communities is relevant to whether or not there was an expectation that exports would ensue from the project benefiting from HB 2294, it is outlined in the following paragraphs. We note that the European Communities relies on objective evidence regarding the effect of the capacity condition and also refers to the subjective knowledge of the government of this alleged effect.

7.1552 The European Communities submits a number of exhibits to prove that the requirement that Boeing build a facility in Washington with the capacity to produce thirty-six superefficient airplanes will ultimately result, or could be expected to result, in exports. The European Communities' reasoning proceeds in two-steps; first, that once built, the required capacity will be fully utilized and second, that Boeing could not sell 36 superefficient airplanes in the United States market alone and so must export the excess.

7.1553 To support the notion that the requirement to build a facility with the capacity to produce thirty-six aircraft leads to the production of at least thirty-six superefficient airplanes per year, the European Communities reasons that companies do not create production capacity that is intended to stand idle. The European Communities asserts that in the LCA industry, a manufacturer creates its production capacity based on the number of orders already received for the airplane in question as well as on orders that it forecasts it will secure.[3280] The requirement that thirty-six superefficient

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[3277] European Communities' first written submission, para. 983 and Governor Gary Locke Speech, World Trade Club Annual Dinner, 29 May 2003, Exhibit EC-638.

[3278] European Communities' first written submission, para. 984 and Schedule 3 to Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71.

[3279] See e.g. European Communities' response to question 54, para. 177, where the European Communities states that the capacity requirement is tantamount to a requirement to export. Also see European Communities' first written submission, paras. 992-995, where the European Communities submits that the capacity requirement created an expectation of exports.

[3280] European Communities' response to question 54, para. 175.

airplane be built was based on Boeing's determination that it would have sufficient orders to produce and deliver thirty-six 787s per year.[3281] In addition, the European Communities argues that if Boeing were to establish the capacity to produce thirty-six aircraft per year it would suffer "grave" financial consequences if it were not to produce at least thirty-six 787s each year.[3282] Establishing the capacity to produce a certain number of aircraft requires not only the building of an assembly facility, but also requires that Boeing have adequate capacity in its supply chain to produce and deliver thirty-six aircraft. This requires order and delivery to the assembly facility of the necessary components. It is difficult to reverse these capacity decisions without suffering "significant financial costs".[3283] Therefore, according to the European Communities, it is "implausible in the extreme" that Boeing would build an assembly facility with the capacity to produce thirty-six 787s per year and then allow that facility to stand idle, or to under-utilize it.[3284] Indeed, the European Communities provides a statement from the Manager of Boeing's 787 programme that, at the time HB 2294 was enacted, Boeing expected to make 1,750 Dreamliners over a period of twenty years, which the European Communities calculates as equivalent to eighty-eight 787s per year, far higher than thirty-six.[3285]

7.1554 The final step in the European Communities' argument that the capacity requirement amounts to an export requirement, or at least could be expected to lead to exports, is that the level of demand in the United States market is incapable of absorbing a production level of thirty-six 787s and therefore, it is necessary for Boeing to export at least some of its production. The European Communities relies upon a declaration by the Head of Market Analysis and Research at Airbus, Mr. Andrew Gordon, to support this contention.[3286] Mr. Gordon analyzes the backlog position of the 787, the historical share and deliveries for aircraft in the 787 class and concludes that it is "extremely unlikely that production of 36 aircraft per year for the 787 could be sustained by the United States market alone".[3287] In particular, Mr. Gordon notes that the 787 orderbook at the end of 2006 included orders for 448 aircraft, of which thirty-eight were for airlines domiciled in the United States. Mr. Gordon excludes from this figure aircraft ordered by United States-based leasing companies, which supply aircraft on an operating lease basis to customers worldwide, although the European Communities acknowledges that it is unclear to what extent those orders indirectly go to United States airlines. Mr. Gordon notes that delivery of the thirty-eight 787s ordered by United States airlines is expected to take place over a number of years. According to a forecast by Airclaims, the deliveries will take place over six years, with between nine and four deliveries per year over this period.[3288]

7.1555 Mr. Gordon also considers the 2006 "Current Market Outlook" produced by Boeing. The Current Market Outlook includes a statement by Boeing that in North America 1,410 "twin aisle" aircraft will be delivered between 2006-2025.[3289] As this figure includes exports to Canada and aircraft in the twin-aisle category apart from the 787, namely the 767, 777, A330/A340 and A350, Mr. Gordon makes a number of "conservative" assumptions to convert the figure into the number of 787s to be delivered to the United States market between 2006-2025. In particular, Mr. Gordon makes a conservative estimate that 5 per cent of deliveries will be to the Canadian market and that

[3281] European Communities' response to question 54, para. 175.
[3282] European Communities' response to question 54, para. 177.
[3283] European Communities' response to question 54, para. 176.
[3284] European Communities' non-confidential statement at the first meeting with the Panel, para. 105.
[3285] See European Communities' non-confidential statement at the first meeting with the Panel, para. 105; Boeing Webcast, The Boeing Company Annual Investors Conference, 23 May 2007, at 787 Program – Mike Bair, Q and A, 00h:24m:38s, Exhibit EC-1149; James Gunsalus, "Investors hope Boeing can avoid delays of its own," International Herald Tribune, 18 June 2007, Exhibit EC-1150; and Boeing 787 Dreamliner Program Fact Sheet, Exhibit EC-340.
[3286] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8.
[3287] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 8.
[3288] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 4.
[3289] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 4.

half of the estimated deliveries will be 787s.[3290] This results in a very optimistic estimate of thirty-three deliveries of 787s per year in the United States market.[3291] Using forecasts from the 2005 and 2004 Current Market Outlooks leads to estimates of twenty-nine and twenty-seven respectively.[3292] Finally, Mr. Gordon also uses the 2006 Airbus Global Market Forecast to estimate the level of demand for 787s in the United States market. The Airbus forecast is that the United States will demand 644 aircraft in the 250-300 seat category over 20 years. Using the same conservative assumption of a 50/50 split in demand between 787s and all other 250-300 seat aircraft results in an estimate of approximately sixteen 787 deliveries per year in the United States market. This estimate drops to ten when the 2004 Airbus Global Market Forecast is used.[3293] Mr. Gordon concludes:

> "An examination of the current backlog for the 787 and competing types, as well as recent Boeing and Airbus forecasts, all suggest that deliveries of 36 787 aircraft per year into the US market alone is highly unlikely."[3294]

7.1556 In contrast to this evidence, the United States argues that its domestic market is capable of absorbing "well in excess" of thirty-six superefficient airplanes per year.[3295] The United States refers to documents which suggest that between December 2004 and June 2007, Boeing received orders for 140 787s from customers located within the United States. The United States divides this figure by the number of months between December 2004 and June 2007 to conclude that this results in average sales in the United States market of four 787s per month or 54.2 per year.[3296]

7.1557 The European Communities argues that the United States' evidence is extremely misleading because the United States' figures represent *orders,* rather than *production*.[3297] The European Communities states that, in fact, "Boeing … began producing the 787 only in 2007 and it reported in April 2007 that its 787 delivery positions were sold out until 2014".[3298] Therefore Boeing will produce the 140 orders between 2007-2014, at an average rate of approximately twenty 787s per year, rather than over the period 2004-2007, as suggested by the United States.[3299] Further, the European Communities objects to the inclusion in the United States' figures of orders placed by United States-based leasing companies. According to the European Communities, the effect of this is that even the estimate of the twenty deliveries to the United States market per year is an overestimate.[3300]

7.1558 As well as submitting evidence that the effect of the capacity condition is to lead to exports, the European Communities makes submissions to support the notion that the Government of the State of Washington was aware of or expected this when it granted the subsidies. In particular, the European Communities asserts that the granting authority was aware of the capacity of the United States market for 787 airplanes.[3301] The European Communities notes that, prior to the enactment of HB 2294, Washington State estimated the value of the B&O tax reduction to Boeing through until 2024. To calculate this, because the B&O tax reduction is an *ad valorem* subsidy,

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[3290] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 9.
[3291] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 11.
[3292] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 12.
[3293] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, paras. 13-14.
[3294] Declaration of A. Gordon Regarding 787 Export Sales, 21 February 2007, Exhibit EC-8, para. 16.
[3295] United States' first written submission, para. 702.
[3296] United States' first written submission, para. 702.
[3297] European Communities' non-confidential statement at the first meeting with the Panel, para. 112.
[3298] European Communities' non-confidential statement at the first meeting with the Panel, para. 113. We assume the reference to "producing" the 787 is a reference to the assembly of the 787.
[3299] European Communities' non-confidential statement at the first meeting with the Panel, para. 112.
[3300] European Communities' non-confidential statement at the first meeting with the Panel, para. 114.
[3301] European Communities' response to question 267.

BCI deleted, as indicated **[***]**

Washington officials necessarily had specific industry information about Boeing's anticipated revenue and sales of LCAs.[3302] Further, the European Communities contends that Washington officials "certainly must have reviewed the most recent versions of Boeing's Current Market Outlook, given Boeing's importance to the state economy".[3303] The Boeing Market Outlook enabled the grantors of the subsidies to conduct the same type of analysis as was conducted by Mr. Gordon, market analyst at Airbus, in order to determine the level of demand for 787s in the United States market.[3304]

7.1559 In response to the European Communities' submissions regarding the awareness of the grantor of the subsidies of the level of demand in the United States market for 787 airplanes, the United States asserts that the European Communities has provided no evidence of any such awareness of the market or anticipation of exportation.[3305] The United States submits that the European Communities' argument that Washington State officials "certainly must have reviewed the most recent versions of Boeing's Current Market Outlook" is a mere assertion. There is no evidence that Boeing provided the Current Market Outlooks to Washington State as part of the decision making process preceding the granting of the subsidies.[3306] Further, there is no evidence that the Washington State officials actually performed the type of calculations required to convert the figures in the Current Market Outlook into an estimation of the number of 787s to be sold in the United States market (by excluding Canada and models apart from the 787 from the figures provided).[3307] The United States also argues that even if the Washington officials estimated the value of the B&O tax reduction to Boeing, this does not indicate an awareness of the capacity of the United States market or an anticipation of exportation.[3308]

Conclusion on "anticipated exportation"

7.1560 In our view, the European Communities has provided adequate evidence to demonstrate that the grantor of the subsidy anticipated exportation.

7.1561 In reaching this conclusion, we accord some weight to the term of the MSA, namely Article 10.6.1, which refers to the fact that the commercial aircraft market is "international". A possible interpretation of this is that the market is one in which sales occur in the global market and not only within the United States. Given that the reference to the "international" nature of the market is found within a term of the MSA, this provides some evidence that the parties to the Agreement, including the State of Washington, expected that the sale of the Boeing 787 would involve exports. However, we do not consider it conclusive evidence because the "international" nature of the market may be a reference to the fact that there are two main players in the commercial aircraft market, one of which is not a United States company.

7.1562 Our conclusion is also based upon the evidence regarding the export orientation of Boeing.[3309] We acknowledge that footnote 4 to Article 3.1(a) indicates that the mere fact that a subsidy is granted to enterprises which export cannot be the sole reason for concluding that an export contingent subsidy exists. However, in *Canada – Aircraft* the Appellate Body held that this second sentence in footnote 4 is a "specific expression of the requirement in the first sentence to demonstrate the "tied to" requirement".[3310] Therefore, while the export orientation of an entity cannot be the only evidence in support of a "tie" between the grant of a subsidy and anticipated exports, and therefore a conclusion that an export contingent subsidy exists, it is relevant information to consider in determining whether

[3302] European Communities' response to question 267, para. 468.
[3303] European Communities' response to question 267, para. 469.
[3304] European Communities' response to question 267, para. 469.
[3305] United States' comments on European Communities' response to question 267, para. 453.
[3306] United States' comments on European Communities' response to question 267, para. 455.
[3307] United States' comments on European Communities' response to question 267, para. 456.
[3308] United States' comments on European Communities' response to question 267, para. 457.
[3309] See paras. 7.1547-7.1550 of this Report.
[3310] Appellate Body Report, *Canada – Aircraft*, para. 173.

exports are anticipated at all. We conclude that the extensive publicly available information presented by the European Communities regarding the export orientation of Boeing provides evidence that the State of Washington anticipated that exports would ensue from the project benefiting from HB 2294, namely assembly of the 787 in Washington. The statements from the Governor of Washington regarding the contribution of Boeing to the State's export performance also indicate that the State of Washington anticipated that exports would arise or continue as a result of the granting of the taxation subsidies under HB 2294. At least one of the statements of the Governor, indicating an expectation that the export performance of Boeing would be promoted under the agreement to site the 787 assembly facility in Washington, is included as a Schedule to the MSA.[3311] Its incorporation in the agreement between the two parties indicates that the statement is more than political rhetoric delivered to promote a subsidy package to a constituency.

7.1563 In the light of this evidence, it would be unrealistic to conclude that the grantor of the subsidies did not have an expectation of exports.

7.1564 In reaching this conclusion, the Panel notes that the evidence submitted by the European Communities in relation to the effect of the capacity condition upon exports seems somewhat equivocal. We note that the European Communities' case that the United States market cannot absorb a production level of 36 787s per year is quite a marginal one. In particular, the estimate of the Airbus analyst that there is a level of demand in the market for 33 superefficient airplanes per year seems relatively close to 36 airplanes per year which the European Communities asserts Boeing will produce. Further, the statements regarding the knowledge of the State of Washington regarding the capacity of the domestic market seem merely to be assertions, without being concrete evidence. Nevertheless, given the statements made in the legal documents associated with HB 2294, upon which both parties rely, regarding the international nature of Boeing's market, and also given the export orientation of Boeing, we conclude that the State of Washington expected exports to ensue from the project benefiting from HB 2294.

7.1565 For these reasons, the Panel finds that the grantor of the subsidy anticipated exportation.

Whether the grant of the subsidy was "tied" to the anticipated exportation

7.1566 The United States argues that the major flaw in the European Communities' Article 3.1(a) claim is that it does not provide sufficient evidence of a "tie" between any expectations of exports and the granting of the subsidies. The evidence relied upon by the European Communities to support its case that there was a "tie" between the enactment of HB 2294 and Washington State's anticipation of exports is principally related to the capacity requirement.[3312] The European Communities contends that the Washington officials envisaged that exports would arise as a result of this requirement and that the granting of the subsidies, by the very terms of HB 2294, was contingent upon, and therefore "tied to", this requirement being met.[3313]

7.1567 In addition to the capacity requirement found in HB 2294, the following evidence could potentially shed some light on whether the subsidies were granted because of anticipated exports:

[3311] European Communities' first written submission, para. 984 and Schedule 3 to Project Olympus Master Site Agreement, Restatement of Commitments, 10 November 2003, Exhibit EC-71.
[3312] See European Communities' first written submission, paras. 991-996.
[3313] European Communities' first written submission, paras. 992-996.

BCI deleted, as indicated **[***]**

(a) A speech by the Governor of Washington which included statements suggesting that he wanted to keep Boeing in Washington because of its export performance:

> "We must … do everything possible to keep our top companies here – including companies that strengthen our international trade. As you know, we are energetically pursuing Boeing 7E7 final assembly. Boeing has historically been a major exporter for our state and for our nation. We want to keep Boeing assembly and supplier jobs right here where they belong."

(b) The letter attached to the Master Site Agreement regarding the Governor's promotion of Boeing sales in China:

> "The recent trade mission I led to China is another example of how the state can play a beneficial and significant role in helping keep Boeing and other Washington companies competitive. I met with high-level government officials and airline executives for the purpose of promoting the purchase of Boeing airplanes."

(c) The fact that HB 2294 acts as a filter, such that only companies which produce products that will necessarily be exported may be recipients of the subsidies.[3314]

7.1568 In addition to the evidence cited by the European Communities in relation to its export contingency claim, there is other evidence before us regarding HB 2294, which was submitted by the parties in the context of demonstrating that the tax incentives constitute subsidies under Article 1.1 of the SCM Agreement, but which we consider to be relevant background evidence in determining if the subsidies were granted because of anticipated exportation.

7.1569 The following evidence reveals that at least one of the reasons in granting the tax incentives under HB 2294 was to encourage Boeing to locate its final assembly facility for the 787 in Washington rather than another state because this would have positive effects on the State's economy, particularly its employment rate. Given that Article 3.1(a) of the SCM Agreement provides that a subsidy is prohibited if it is contingent, *whether solely or as one of several other conditions*, upon export performance, the fact that the subsidies were granted to encourage Boeing to locate its assembly facility in Washington in order to increase employment does not rule out the possibility that the subsidies are contingent in fact upon another condition, namely anticipated exports. Nevertheless, we provide a summary of the evidence that indicates that the subsidies were granted to encourage Boeing to locate in Washington as relevant background information to the circumstances surrounding the grant of the subsidies.

- HB 2294

7.1570 A review of the legislation itself provides some insight regarding the reasons for the introduction of the tax incentives:[3315]

> *"Preamble*: An Act relating to retaining and attracting the aerospace industry to Washington state.[3316]

[3314] For the "filter argument", see European Communities' first written submission, para. 991.
[3315] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, p. 20.
[3316] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, p. 1.

BCI deleted, as indicated **[***]**

> *Section 1*. The legislature finds that the people of the state have benefited from the presence of the aerospace industry in Washington state. The aerospace industry provides good wages and benefits for the thousands of engineers, mechanics, and support staff working directly in the industry throughout the state. The suppliers and vendors that support the aerospace industry in turn provide a range of jobs. The legislature declares that it is in the public interest to encourage the continued presence of this industry through the provision of tax incentives. The comprehensive tax incentives in this act address the cost of doing business in Washington state compared to locations in other states.[3317]
>
> *Section 16.* (1) The legislature finds that accountability and effectiveness are important aspects of setting tax policy. In order to make policy choices regarding the best use of limited state resources the legislature needs information on how a tax incentive is used.
>
> (2)(a) A person {eligible for the incentives under} this act shall make an annual report to the department detailing employment, wages, and employer-provided health and retirement benefits per job at the manufacturing site. The report shall not include names of employees. The report shall also detail employment by the total number of full-time, part-time, and temporary positions. The first report filed under this subsection shall include employment, wage, and benefit information for the twelve-month period immediately before first use of a preferential tax ...or tax exemption or credit...The report is due by March 31st following any year in which a preferential tax rate...is used, or tax exemption or credit... is taken.
>
> (b) If a person fails to submit an annual report under (a) of this subsection by the due date of the report, the department shall declare the amount of taxes exempted or credited, or reduced in the case of the preferential business and occupation tax rate, for that year to be immediately due and payable. Excise taxes payable under this subsection are subject to interest but not penalties, as provided under this chapter."

- The MSA

7.1571 The MSA confirms that the tax incentives under HB 2294 will be provided to Boeing. It also deals with a range of other alleged subsidies provided by the government to Boeing in the State of Washington. It provides some insight regarding the reasons for the introduction of HB 2294 and the other incentives. It provides:

> "*Recital D* The Public Parties recognize that the {final assembly facility for the 787} will have a significant positive impact on the welfare of the community {and} the State including the creation of jobs, increased tax revenues and other benefits, and therefore the Public Parties are desirous of having Boeing locate the {final assembly facility} within the State; and
>
> *"Recital E* The Public Parties recognize that Boeing can locate the {final assembly facility} in other states and that, by locating its facilities within the State, the citizens and the constituents of the State…will be benefited." [3318]

[3317] HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54, p. 1.
[3318] MSA, Exhibit EC-58, p. 2.

BCI deleted, as indicated **[***]**

- The Memorandum of Agreement

7.1572 Section 17 of HB 2294 provides that the legislation becomes effective when the Governor of the State and a manufacturer of commercial airplanes sign a memorandum of agreement regarding an affirmative final decision to site a significant commercial airplane final assembly facility in the State. The MOA is the agreement between the Governor and Boeing under section 17 of HB 2294. It provides:

> *"Recital C.* In order to enhance the desirability of the State as a place to do business and to promote economic growth for the benefit of its citizens, the State legislature passed HB 2294." [3319]

- The House and Senate Floor Debates for HB 2294

7.1573 The European Communities submits an exhibit that is the unofficial transcript of the House and Senate Floor Debate for the third reading of HB 2294.[3320] It provides:

> *"Representative Pettigrew*: {T}his legislation is part of our effort to get the 7E7 built here in our state, As you know we are one of several states that are vying for this opportunity. Where in the past we were very, very confident that we could compete with any region across the country as it relates to aerospace, but what we're finding ourselves – finding out is that we are in the economic fight of our lives.
>
> "What's at stake here is not only the future of Boeing but our state's economy. For decades the aerospace industry has been a stable part of our economy and Boeing has been the centerpiece of that industry…
>
> "It's about supporting the suppliers that support Boeing. It's about supporting the small businesses that as a result of Boeing succeed. This is about 130, 000 jobs. It's about $700 million to $1 billion in our general fund. This is about keeping our community strong.
>
> "The legislation…represents a good package for us to get the 7E7 here. It provides a number of tax incentives, yes. It helps Boeing be competitive, yes…but there are triggers in it that will allow us to have the accountability for our investment that we want.[3321]
>
> *"Senator Rossi:* …we'd like to see the Boeing company stay in the State of Washington.
>
> "This is a tax incentive package, which will hopefully entice the 7E7, the Boeing Company to build it here in the State of Washington…
>
> "The idea is to make sure that we have these jobs in the State of Washington – good paying jobs in the State of Washington.

[3319] Memorandum of Agreement for Project Olympus, 19 December 2003, Exhibit EC-57.

[3320] State of Washington, House and Senate Floor Debates, HB 2294, June 2003, Unofficial Transcript, Exhibit EC-70.

[3321] State of Washington, House and Senate Floor Debates, HB 2294, June 2003, Unofficial Transcript, Exhibit EC-70, pp. 1-2.

BCI deleted, as indicated **[***]**

> "The dollar amounts add up to $25 million in this biennium. In the next biennium, $103 million…But look at what the potential is if Boeing leaves. What is the potential? We could lose revenue to the state of about $540 million a year.
>
> "We need to do this. We need to make sure that our hand is strengthened so we can be one of the three finalists, one of the states that will be in the finals to have the 7E7 in their state… We believe that this will make us very competitive.[3322]
>
> *"Senator Fairley:* That's what this bill is about, keeping Boeing and our identity for Boeing in our state. We like the jobs. We like the company. We like the planes. This bill will help us."[3323]

- Speeches and statements by Governor Gary Locke

7.1574 Aside from the statements of Governor Locke referenced by the European Communities in its prohibited subsidy claim, a number of other statements by the Governor on the record provide relevant background to the introduction of the taxation incentives:

> *"Press Release from the Office of the Governor, 9 June 2003.*
>
> "Gov. Gary Locke today unveiled his tax incentives package to help the state land final assembly of the Boeing 7E7, stressing the huge economic impact the project would have on the state. Locke emphasized that the project would not only create 1,200 jobs directly related to assembling the 7E7, but would also create hundreds of thousands of related jobs…
>
> "The total expected economic impact of building the 7E7, and its derivatives, in Washington state:
>
> - As many as 150,000 jobs, including suppliers and other multiplier effects; and
> - As much as $540 million in tax revenue per year…
>
> "This a thoughtful package to address how Boeing will do business in Washington in the future….
>
> "This tax incentives package is critical to the long-term competitiveness and economic vitality of our state…the Action Washington team continues to develop a creative, aggressive proposal to convince the Boeing Company that Washington is the best place for final assembly of the 7E7." [3324]
>
> *"Press Release from the Office of the Governor, 9 June 2003.*

[3322] State of Washington, House and Senate Floor Debates, HB 2294, June 2003, Unofficial Transcript, Exhibit EC-70, pp. 6-8.

[3323] State of Washington, House and Senate Floor Debates, HB 2294, June 2003, Unofficial Transcript, Exhibit EC-70, p. 9.

[3324] News Release, Office of Governor Gary Locke, Gov. Gary Locke Unveils Tax Incentives Package to Help Land Boeing 7E7, Outlines Project's Significant Economic Impact on State, 9 June 2003, Exhibit EC-69.

> "We've delivered to Boeing a very strong and compelling package. Now we will leave it to Boeing to make the best possible choice for the 7E7 final assembly. And we know that choice will be Washington!
>
> …We responded with a dynamic, innovative and creative proposal that will prove to Boeing that Washington state is the best place in the world to build the 7E7." [3325]

7.1575 In our view, the European Communities has not established that the grant of the subsidies under HB 2294 was "tied to" anticipated exportation.

7.1576 The European Communities' position appears to be that the capacity condition, requiring a location with the capacity to produce at least thirty-six superefficient airplanes to be sited within the State of Washington, is sufficient to establish the required "tie". The European Communities reasons that the capacity condition creates an expectation of exports. Further, given that the grant of the subsidies was contingent upon meeting the capacity condition, the subsidy was "tied to" anticipated exportation. We do not agree that the capacity condition is sufficient to establish the required "tie" between the grant of the subsidy and anticipated exportation.

7.1577 On a generous view of the European Communities' evidence it is possible to conclude that fulfilment of the capacity condition created an expectation of exports. The European Communities relies upon a declaration by Mr. Andrew Gordon, Head of Market Analysis and Research at Airbus, in order to conclude that the United States' market was incapable of absorbing a production level of thirty-six superefficient airplanes per year. Mr. Gordon's estimates of the demand per year for 787 in the United States' market range from four to thirty-three.[3326] Such a large range in itself creates some uncertainty regarding the strength of the estimates. Further, the upper end of the range is close to the capacity condition requirement of 36 superefficient airplanes. Nevertheless, even accepting that the capacity condition could create an expectation of exports, in our view the condition is not sufficient to establish the required "tie". A link between the capacity condition, upon which the grant of the subsidy depended, and expected exports is not explicit within the legislation or anywhere else. Nevertheless, the evidence of Mr. Gordon provides some suggestion that there may be such a link. However, in order to establish a prima facie case of such a tie between the grant of the subsidy and anticipated exportation, in our view, further evidence is required. It is possible that the capacity condition was not in fact included as a pre-condition to the grant of the subsidies in HB 2294 because of anticipated exports. Rather, as the United States argues, the requirement that a "significant" assembly facility be established may have been included because of a concern to create "higher value jobs, tax income, and upstream activity" in Washington State.[3327] Therefore, we require some further corroborating evidence to support the European Communities' case that HB 2294 was granted because of anticipated exports. Our approach in this regard is supported by the Appellate Body's statement in *Canada – Aircraft* that "the relationship of contingency, between the subsidy and export performance, must be inferred from the total configuration of facts constituting and surrounding the granting of the subsidy, none of which on its own is likely to be decisive in any case".[3328]

7.1578 In relation to the additional evidence, aside from the capacity condition, that could potentially support a finding of the required "tie", we attach a relatively low probative value to the statement of Governor Locke, regarding his wish to keep companies that strengthen international trade within the State of Washington, and his consequent energetic pursuit of Boeing. We note that this statement

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[3325] News Release, Office of Governor Gary Locke, Gov. Locke, Business, Labor and Government Leaders Celebrate Delivery of State's 7E7 Proposal at 'Action Washington' Rally, 20 June 2003, Exhibit EC-62.

[3326] See paras. 7.1554-7.1555 of this Report.

[3327] United States' response to question 268, para. 461. The United States argues that requiring a "significant" final assembly facility to be located in Washington gives the State some certainty that its objectives are being met.

[3328] Appellate Body Report, *Canada – Aircraft*, para. 167.

does not explicitly mention the tax incentives. However, we acknowledge that the statement was made on 29 May 2003, less than two weeks before the passing of HB 2294 by the House and Senate on 11 June 2003[3329], which provides some evidence that the taxation-related subsidies were a part of the "pursuit" of Boeing to which he refers. Even if this is the correct interpretation of his statement, in our view it needs to be considered in the context in which it was delivered, namely that of a public official emphasizing the potential benefits of a programme under which significant levels of public revenue were to be foregone.

7.1579 Although Governor Locke's second statement regarding the trade mission he led to China is an attachment to the MSA and therefore a part of the official documentation surrounding the siting of the 787 assembly facility in Washington and the consequent granting of the subsidies, the statement does little to advance the European Communities' argument. The statement does not indicate that Governor Locke was interested in China because it is an export market. The statement indicates that the Governor was aiming to promote Boeing sales, but it does not indicate that he was targeting particular markets by virtue of the fact that they were export markets. In our view, the statement does not indicate that the subsidies were granted because of the expectation of exports.

7.1580 Finally, the European Communities notes that only companies that produce products that will necessarily be exported may be recipients of the subsidies. Although according to footnote 4 of Article 3.1(a), the fact that a subsidy is granted to an enterprise that exports cannot be the sole reason for finding an export contingent subsidy, this is a factor that we can consider, in combination with the other evidence on the record. However, in our view, an overall assessment of the evidence leads to the conclusion that the European Communities has not established the required "tie" between HB 2294 and the grantor's anticipation of exportation.

7.1581 The evidence before the Panel in this case falls far short of that before the panel and Appellate Body in *Canada – Aircraft*. In that case, there were sixteen factual elements found within the official documentation associated with the granting of the subsidy that indicated the subsidy was granted because of the expectation of exports. The evidence indicated that the grantor of the subsidies relied upon and attached importance to the expected export performance of applicants for the subsidies. Although there was less evidence before the panel in *Australia – Automotive Leather II*, we note that this decision was never appealed. Further, the decision was made against the background of the Australian Government agreeing by settlement with the United States to remove automotive leather from eligibility for two programmes pursuant to which the exporter in issue earned significant benefits from its exports.[3330] The Australian Government signed the grant contract eight days after automotive leather was excised from the two pre-existing programmes.[3331] Although not always explicit within the panel report, this background seems to have influenced the panel in reaching its decision that the grant contracts were export contingent subsidies.[3332]

7.1582 In relation to the evidence indicating that HB 2294 was granted because of the State of Washington's desire to have assembly of the 787 sited in Washington rather than another State, due to the positive effects this would have on Washington's economy, particularly its employment rate, we recall that Article 3.1(a) of the SCM Agreement provides that a subsidy is prohibited if it is

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[3329] See HB 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003), Exhibit EC-54 and Governor Gary Locke Speech, World Trade Club Annual Dinner, 29 May 2003, Exhibit EC-638.

[3330] Panel Report, *Australia – Automotive Leather II*, para. 9.65.

[3331] Panel Report, *Australia – Automotive Leather II*, see paras. 2.2 and 2.5 for the date on which the grant contract was signed and the date on which automotive leather was removed from eligibility for the two pre-existing programmes.

[3332] At para. 9.63 the Panel states that it is "taking into consideration" the fact that the Australian Government was providing assistance to the exporter in response to the removal of automotive leather from eligibility for benefits under the two pre-existing programmes. See also, para. 9.65 where the Panel considers the actions of the Australian Government.

contingent, *whether solely or as one of several other conditions*, upon export performance. Therefore, even if one of the conditions for the grant of the subsidies was that assembly of the 787 occur in Washington in order to increase employment, this does not exclude the possibility of a tie between HB 2294 and anticipated exportation. However, in our view, the clear and convincing evidence indicating that the subsidies were granted because of the State's desire to attract the 787 assembly to the Washington economy in order to boost employment, in comparison to the paucity of evidence suggesting a tie between the grant of the subsidy and anticipated exportation, reinforces our conclusion that the European Communities has not made its case under Article 3.1(a).

7.1583 For theses reasons, the Panel finds that the European Communities has not demonstrated a "tie" between the grant of the subsidies and anticipated exportation or export earnings. Consequently, the Panel finds that the European Communities has not demonstrated that HB 2294 was de facto contingent upon export performance on the basis of being tied to anticipated exportation.

Grant of a subsidy in fact tied to *actual* exportation

7.1584 The majority of the submissions of the European Communities are directed towards establishing that the grant of the taxation incentives was contingent upon *anticipated* exportation. However, in response to a Panel question regarding whether the European Communities is arguing that the grant of the subsidies is tied to "anticipated" or to "actual" exportation, the European Communities responds that:

> "{I}n order to be certain that it has made all the necessary arguments, the European Communities submits that each of the relevant measures provides for a subsidy contingent upon *actual* export; or alternatively contingent upon *anticipated* export; or alternatively contingent upon actual *or* anticipated export; or alternatively contingent upon actual *and* anticipated export." [3333]

7.1585 In its response to the same Panel question, the European Communities provides some explanation of its argument that the grant of the subsidies is tied to "actual" exportation. However, the European Communities admits that its explanation does "not exhaust all the alternative arguments set out" in the preceding paragraph.[3334]

7.1586 In relation to its first legal argument, the European Communities argues, if the correct interpretation of "actual" is "real", as we have found is the case, then the subsidy is tied to actual exports in the sense that it is only when the sale takes place that the unconditional right to the subsidy accrues.[3335] However, for the reasons expressed at paras. 7.1541-7.1543 of this Report, we do not accept the European Communities' first legal argument regarding the B&O tax reduction.

7.1587 In relation to its second and third legal arguments, the European Communities submits that if "actual or anticipated" means "real or potential", then HB 2294 is contingent upon anticipated exports. However, HB 2294 also provides for the grant of a subsidy in fact tied to *actual* exports, "because the B&O tax rate reductions are tied to sales".[3336] Therefore, its submission regarding a tie to "actual" exports in relation to its second and third legal arguments again reduces to its argument regarding the B&O tax reduction, which we do not accept.

[3333] European Communities' response to question 57, para. 195.
[3334] European Communities' response to question 57, para. 197.
[3335] European Communities' response to question 57, para. 198.
[3336] European Communities' response to question 57, para. 200. The European Communities also submits an argument that, if the correct meaning of "actual" is "past", then its second and third legal arguments amount to a claim that the subsidy is tied to actual exportation (European Communities' response to question 57, para. 199). However, as we have rejected this interpretation of "actual", there is no need for us to consider the merits of this argument.

7.1588 On the arguments presented by the European Communities in response to question 57, we find no basis to make a finding that HB 2294 is in fact tied to actual exportation. The European Communities argues that its explanations in response to this question do not exhaust all the alternative arguments it is making (namely, its arguments that the "subsidy is contingent upon *actual* export; or alternatively contingent upon *anticipated* export; or alternatively contingent upon actual *or* anticipated export; or alternatively contingent upon actual *and* anticipated export"). However, where the European Communities has provided no arguments or evidence to support a claim, we find no basis to uphold it.[3337] For these reasons, the Panel finds that the European Communities has not demonstrated that the subsidies were tied to actual exportation.

7.1589 Consequently, in relation to the European Communities' second and third legal arguments[3338], the Panel finds that the European Communities has not demonstrated that HB 2294 is contingent upon export performance.

(g) Conclusion

7.1590 **For these reasons, the Panel finds that the European Communities has not demonstrated that the taxation measures enacted under HB 2294 are inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.**

F. WHETHER THE UNITED STATES CAUSES, THROUGH THE USE OF THE SUBSIDIES AT ISSUE, ADVERSE EFFECTS WITHIN THE MEANING OF ARTICLE 5(C) OF THE SCM AGREEMENT

1. Introduction

7.1591 The European Communities claims that the United States, through the use of the subsidies to Boeing, causes adverse effects to the European Communities' interests within the meaning of

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[3337] Although the European Communities does not explicitly make this argument in support of a claim that the subsidies are tied to *actual* exportation, its only other argument that could possibly be interpreted as supporting a claim that HB 2294 is in fact tied to "actual" exportation is the argument that the capacity requirement is tantamount to a requirement to export (European Communities' response to question 54, especially para. 177). If the capacity requirement in fact operates as a requirement to export, perhaps this could be some evidence in support of a tie to exports that will actually occur, rather than to exports that are anticipated to occur. The European Communities argues that if Boeing built a facility with a capacity to produce 36 superefficient airplanes per year, it would produce at this capacity, which would require exportation to occur due to the level of domestic demand for superefficient airplanes. In our view, although it may be logical for Boeing fully to utilize the capacity it has created, it is possible to think of any number of situations where this may not occur. Indeed, Article 10.6.1 of the Master Site Agreement includes a clause that provides:

> "Boeing's production and assembly of the 7E7 Aircraft is market-driven. The commercial aircraft market is international and highly competitive. Despite Boeing's extensive investments and good faith efforts to predict markets for the 7E7 Aircraft, Boeing cannot guarantee that those markets will materialize or be sustained as predicted or desired."

Upon its attention being directed to this clause in a Panel question, the European Communities distances itself from the argument that the capacity requirement is tantamount to a requirement to export and emphasizes that HB 2294 is tied to anticipated export performance (European Communities' response to question 271). Therefore, if the European Communities ever intended to assert that the capacity condition is evidence in support of a tie to actual exportation, on the basis that the capacity condition amounts to a requirement for exports actually to occur, this is not made out on the facts. A contingency that can be satisfied without a single sale being made, and where the resulting subsidy continues to be provided even if no export sales are ever made, does not support the notion that the subsidies in issue are tied to *actual* exportation.

[3338] As advanced in European Communities' response to question 56 and summarized at para. 7.1490 of this Report.

Article 5(c) of the SCM Agreement; i.e. "serious prejudice" to the interests of the European Communities. The European Communities makes what it asserts to be two, independent serious prejudice claims.

7.1592 One claim is that the subsidies to Boeing cause serious prejudice within the meaning of Article 5(c) of the SCM Agreement in the form of "significant price suppression" and "significant lost sales", and a threat thereof, in the world market, within the meaning of Articles 5(c) and 6.3(c) of the SCM Agreement, as well as displacement and impedance in the United States and third country markets, and a threat thereof, within the meaning of Articles 5(c), 6.3(a) and 6.3(b) of the SCM Agreement.[3339] This serious prejudice claim is addressed below in section 2 of this Part of the Report.

7.1593 The other claim is that the United States causes serious prejudice to the European Communities' interests by violating the *Agreement concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft* (the 1992 Agreement); specifically, that the United States has violated agreed obligations concerning support to the LCA sector that are set forth in the 1992 Agreement.[3340] According to the European Communities, this alleged violation by the United States of its obligations under the 1992 Agreement constitutes serious prejudice to the European Communities' interest in having its international obligations respected.[3341] This serious prejudice claim is further discussed in section 3 of this Part of the Report.

2. Whether the United States causes serious prejudice to the interests of the European Communities in the form of significant price suppression and significant lost sales, and a threat thereof, in the world market, and displacement and impedance, and a threat thereof, in the United States and third country markets

(a) Main arguments of the parties and third parties

(i) European Communities

7.1594 The European Communities argues that the subsidies to Boeing have resulted in serious prejudice within the meaning of Article 5(c) of the SCM Agreement in the form of "significant price suppression" and "significant lost sales", and a threat thereof, in the world market, within the meaning of Article 6.3(c) of the SCM Agreement, as well as displacement and impedance in the United States and third country markets, and a threat thereof, within the meaning of Articles 6.3(a) and 6.3(b) of the SCM Agreement.[3342]

7.1595 The European Communities seeks to establish its serious prejudice claim by reference to events that occurred between 2004 and 2006 in what it asserts are three specific LCA product markets; namely, the 100-200 seat single-aisle LCA market, the 200-300 seat wide-body LCA market, and the 300-400 seat wide-body LCA market.[3343] The table below sets forth the three LCA product

[3339] European Communities' first written submission, para. 1000. In its panel request, the European Communities alleged that the use of the challenged subsidies measures "causes adverse effects – *i.e.*, material injury or threat of material injury to the European Community LCA industry – and serious prejudice including threat of serious prejudice to the interests of the European Communities within the meaning of Article 5(a) and (c) of the *SCM Agreement*"; Request for the Establishment of a Panel by the European Communities, WT/DS353/2, 23 January 2006, p. 13. However, in its submissions to the Panel, the European Communities did not present arguments and evidence concerning material injury under Article 5(a), thereby confining its adverse effects claim to serious prejudice within Article 5(c) of the SCM Agreement; European Communities' first written submission, para. 22.

[3340] European Communities' first written submission, para. 1016.

[3341] European Communities' oral statement at the first meeting with the Panel, para. 117.

[3342] European Communities' first written submission, para. 1000.

[3343] European Communities' first written submission, para. 1151.

markets identified by the European Communities, the Boeing "subsidized" aircraft and the corresponding Airbus "like" aircraft that are alleged to compete in each LCA product market, and the specific forms of serious prejudice alleged in each LCA product market.

Structure of the European Communities' serious prejudice arguments in each of the three LCA product markets

LCA Product market	Alleged Boeing "subsidized product"	Competing Airbus "like product"	Serious prejudice alleged
Single aisle LCA with a capacity of approximately 100-200 passengers and a short to medium range	737NG	A320	significant price suppression of the A320 significant lost sales of the A320 displacement and impedance of European Communities' exports of the A320 from various third country markets[3344] threat of significant price suppression with respect to future orders of the A320
Wide-bodied LCA with a capacity of approximately 200-300 passengers and a medium to long or ultra-long range	787	A330, Original A350 and A350XWB-800[3345]	significant price suppression of the A330, Original A350 and A350XWB-800 significant lost sales of A330 and Original A350 displacement and impedance of European Communities' imports of A330 and Original A350 into the United States displacement and impedance of European Communities' exports of A330 and Original A350 from various third country markets[3346] threat of significant price suppression with respect to future orders of A330 and A350XWB-800

[3344] The European Communities argues that the Panel should determine the existence of serious prejudice in the form of significant price suppression, significant lost sales and displacement and impedance on the basis of order data. The European Communities argues, in the alternative, that if the Panel finds that orders (as opposed to deliveries) booked during the 2004-2006 reference period cannot serve as the basis for the European Communities' serious prejudice claim, the arguments and evidence it presents demonstrate threat of significant price suppression, threat of significant lost sales and threat of displacement and impedance of exports with respect to future *deliveries* of the A320; European Communities' first written submission, paras. 1552, 1563.

[3345] The Original A350 LCA family was marketed by Airbus from December 2004 through 2006 but was replaced by the A350XWB family, which Airbus began marketing in July 2006; European Communities' first written submission, para. 1174. See also para 7.1777 of this Report.

[3346] The European Communities argues that the Panel should determine the existence of serious prejudice in the form of significant price suppression, significant lost sales and displacement and impedance on the basis of order data. The European Communities argues, in the alternative, that if the Panel finds that orders (as opposed to deliveries) booked during the 2004-2006 reference period cannot serve as the basis for the European Communities' serious prejudice claim, the arguments and evidence it presents demonstrate threat of significant price suppression, threat of significant lost sales and threat of displacement and impedance of imports and exports with respect to future *deliveries* of the A330 and A350XWB-800; European Communities' first written submission, paras. 1446, 1469.

BCI deleted, as indicated **[***]**

LCA Product market	Alleged Boeing "subsidized product"	Competing Airbus "like product"	Serious prejudice alleged
Wide-bodied LCA with a capacity of approximately 300-400 passengers and a long or ultra-long range	777	A340 and A350XWB-900/-1000	significant price suppression of the A340 significant lost sales of the A340 displacement and impedance of European Communities' exports of A340 from various third country markets[3347] threat of significant price suppression with respect to future orders of the A350XWB-900/1000

7.1596 The European Communities argues that the subsidies to Boeing have resulted in significant price suppression, significant lost sales and displacement and impedance of exports and imports of Airbus LCA through two causal mechanisms.[3348] First, the aeronautics R&D subsidies are said to have provided Boeing with valuable technologies, knowledge, experience and confidence in certain key technology areas which enabled Boeing to research, design, develop, produce and sell the technologically innovative 787 years earlier than would otherwise have been possible. This subsidy-enabled availability of an aircraft as technologically innovative as the 787 is said to have adversely affected sales, market share and prices of the competing Airbus LCA in the 200 – 300 seat wide-body product market. Second, the additional cash flow from all of the subsidies at issue in this dispute is said to have enhanced Boeing's ability to reduce the prices of its LCA in competitive sales campaigns with Airbus. The lower Boeing LCA prices are argued to have affected sales, market share and prices of the competing Airbus LCA in each of three LCA product markets.

7.1597 The European Communities thus makes a distinction as to the effects of the subsidies on Boeing's commercial behaviour between the 787, on the one hand, and the 737NG and the 777, on the other. With regard to the 787, the European Communities argues that the nature of the subsidies benefiting Boeing's 787 family reveals that these subsidies have *two principal effects* on Boeing's behaviour. On the one hand, the European Communities argues that *the aeronautics R&D subsidies* have had what the European Communities terms "technology effects" in that they "have helped Boeing develop, launch and produce a technologically-advanced 200-300 seat LCA much more quickly than it could have on its own".[3349] The European Communities argues that it is through their effects on Boeing's development of technologies for the 787 that the aeronautics R&D subsidies cause

[3347] The European Communities argues that the Panel should determine the existence of serious prejudice in the form of significant price suppression, significant lost sales and displacement and impedance on the basis of order data. The European Communities argues, in the alternative, that if the Panel finds that orders (as opposed to deliveries) booked during the 2004-2006 reference period cannot serve as the basis for the European Communities' serious prejudice claim, the arguments and evidence it presents demonstrate threat of significant price suppression, threat of significant lost sales and threat of displacement and impedance of exports with respect to future *deliveries* of the A340 and A350XWB-900/1000; European Communities' first written submission, paras. 1640, 1652.

[3348] For example, the European Communities states that it "demonstrates causation in two different ways. First, it demonstrates that Boeing's prices would be higher but for the US subsidies at issue. Second, it demonstrates that Boeing's product offering, in particular with respect to the 787 in the 200-300 seat LCA market, would be different but for the US subsidies"; European Communities' second written submission, para. 711.

[3349] European Communities' first written submission, para. 1343. See also, European Communities' first written submission, paras. 1335,1345.

significant price suppression, significant lost sales, and displacement and impedance suffered by Airbus in the 200-300 seat wide body LCA product market.[3350]

7.1598 On the other hand, the European Communities argues that *all of the subsidies* have what the European Communities refers to as "price effects" in that they have enabled Boeing to charge lower prices for its LCA and capture market share at the expense of Airbus.[3351] The European Communities argues that it is through their effects on *Boeing's prices* of its 737NG, 777 and 787 families of LCA that all of the subsidies in totality cause significant price suppression, significant lost sales, and displacement and impedance suffered by Airbus in the 100-200 seat single-aisle, 300-400 seat wide-body, and 200-300 seat wide-body LCA product markets, respectively.

7.1599 Set forth below is a description of the European Communities' arguments as to (i) the effects of the aeronautics R&D subsidies on Boeing's development of technologies in relation to the 787; and (ii) the effects of the subsidies on Boeing's pricing behaviour with respect to the 737NG, 777 and 787.

Effects of the aeronautics R&D subsidies on Boeing's development of technologies in relation to the 787

7.1600 The European Communities identifies the "aeronautics R&D support provided by NASA, DOD and DOC" as being aeronautics R&D support provided by those U.S. government agencies through specific R&D programmes. The NASA-funded aeronautics R&D programmes are: the Advanced Composite Technology (ACT) Program, the High Speed Research (HSR) Program, the Advanced Subsonic Technology (AST) Program, the High Performance Computing and Communications (HPCC) Program, the Aviation Safety Program, the Quiet Aircraft Technology (QAT) Program, the Vehicle Systems Program and the Research and Technology Base (R&T Base) Program.[3352] The DOD-funded aeronautics R&D programme is the Research, Development, Testing, and Evaluation (RDT&E) Program.[3353] The DOC-funded programme is the Advanced Technology (ATP) Program.[3354]

7.1601 According to the European Communities, the aeronautics R&D subsidies, "primarily through NASA and DOD" gave rise to four effects in the 200-300 seat wide-body LCA market; namely, they: (i) accelerated Boeing's development of new and advanced LCA technologies, as well as design and manufacturing processes, thereby enabling Boeing to bring the 787 to market much sooner than it could have on its own[3355]; (ii) limited and delayed Airbus' access to innovative R&D technologies; (iii) increased the marketability of the 787; and (iv) allowed a rapid ramp-up of 787 deliveries.[3356] The European Communities has sought to demonstrate that the aeronautics R&D subsidies provided Boeing with *usable technologies* in key technology areas, as well as *knowledge, experience* and *confidence* toward developing successful commercial technologies and processes.[3357] The European

[3350] European Communities' first written submission, paras. 1334, 1341, 1376 ("In sum, the nature of the US subsidies for the 787, in terms of their structure, design, and operation, helps reveal that their effects have been to: (1) accelerate Boeing's development, launch, production and future delivery of a technologically-advanced 200-300 seat LCA family; and (2) enable Boeing to significantly reduce its sales prices for 787 family LCA. These effects, in turn, cause significant price suppression, significant lost sales, displacement and impedance, and a threat thereof, in the market for the 787 family and competition Airbus LCA.") .

[3351] European Communities' first written submission, para. 1229.

[3352] European Communities' first written submission, para. 1257.

[3353] European Communities' first written submission, para. 1257.

[3354] European Communities' first written submission, para. 1257.

[3355] European Communities' first written submission, para. 1345.

[3356] European Communities' first written submission, paras. 1350-1358.

[3357] European Communities' first written submission, para. 1352. According to the European Communities, the knowledge, experience and confidence gained by Boeing through its participation in U.S. government-supported aeronautics R&D programmes enabled Boeing to accelerate its development, production

Communities groups these key technologies into six technology areas, the most significant of which concerns composites technologies, primarily the design, development and manufacturing of the 787 composite fuselage and wings.[3358]

7.1602 The European Communities alleges that, pursuant to the NASA's ACT, AST and R&T Base programmes, NASA provided funding and support to Boeing through several R&D contracts and agreements regarding composites research.[3359] In addition, the European Communities contends that Boeing learned about composites technologies relevant to the 787 composite fuselage by participating in a number of projects under DOD RDT&E programmes such as the ManTech Composites Affordability Initiative, the ManTech Advanced Fiber Placement Program, DUS&T High Rate Fiber Placement Program, V-22 Aft Fuselage Demonstration Program, and JSF Prototype Development Program.[3360] According to the European Communities, "{*b*}*ut for* these US Government composites R&D programmes, Boeing would not be able to build and promise deliveries of such an advanced 787 aircraft today. Nor would customers be as willing to buy it".[3361]

7.1603 In relation to the other technology areas, the European Communities alleges that Boeing and McDonnell Douglas collaborated with NASA through the AST Program, and with DOD through a number of programmes under the RDT&E Program, in developing more-electric systems for the 787.[3362] The European Communities argues that the open systems architecture on the 787 likely benefited from the knowledge and experience that McDonnell Douglas gained from an R&D contract under the Technology Reinvestment Program under DOD's RDT&E Program, as well as from dual-use research that Boeing conducted pursuant to the JSF Program.[3363] The European Communities argues that, through contracts under the HPCC Program (CAS project), the AST Program (IWD project), HSR Program and R&T Base Program, as well as through dual-use research conducted under the DOD F-22 Program, the JSF Demonstrator Program and the C-17 Program, Boeing developed knowledge and experience in relation to various technologies, tools and concepts that it used to enhance the aerodynamics and structural design of the 787.[3364] According to the European Communities, Boeing's development of noise reduction technologies used on the 787 was accelerated

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and delivery of the 787 and "is in fact the crux of the causal connection between the U.S. R&D subsidies and the 787", European Communities' first written submission, para. 1356; Annex C, para. 8.

[3358] The remaining five technology areas are: more electric architecture, open systems architecture, enhanced aerodynamics and structural design, noise reduction technologies and health management systems; European Communities' first written submission, paras. 1350-1351.

[3359] European Communities' first written submission, Annex C, para. 26. NASA Contract NAS1-18862 with McDonnell Douglas Corporation regarding Innovative Composite Aircraft Primary Structures (ICAPS), 31 March 1989, Exhibit EC-331; NASA Contract NAS1-18889 with Boeing Commercial Airplanes regarding Research and Development in Advance Technology Composite Aircraft Structures, 12 May 1989, Exhibit EC-329; NASA Contract NAS1-18954 with Boeing Aerospace regarding Advanced Composite Fabrication and Testing, 29 August 1989, Exhibit EC-798; NASA Contract NAS1-19349 with Boeing Commercial Airplanes regarding Structures and Materials Technology for Aircraft Composite Primary Structures, 30 September 1991, Exhibit EC-799; NASA Contract NAS1-20546 with McDonnell Douglas regarding Technology Verification of Composite Primary Wing Structures for Commercial Transport Aircraft, 18 September 1995, Exhibit EC-324; NASA Contract NAS1-20553 with Boeing Commercial Airplane Group regarding Technology Verification of Composite Primary Fuselage Structures for Commercial Transport Aircraft, 25 September 1995, Exhibit EC-334; NASA Contract NAS1-99070 with Boeing Commercial Airplane Group regarding Structures and Materials Technology for Aerospace Vehicles, 25 January 1999, Exhibit EC-800.

[3360] European Communities' first written submission, Annex C, para. 46. The European Communities also alleges that Boeing gained substantial experience and confidence using ATL to fabricate wing skin panels pursuant to DOD funding under the F-22, A-6 and B-2 programmes; European Communities' first written submission, Annex C, para. 59.

[3361] European Communities' first written submission, Annex C, para. 22.

[3362] European Communities' first written submission, Annex C, para. 69.

[3363] European Communities' first written submission, Annex C, para. 78.

[3364] European Communities' first written submission, Annex C, paras. 83-99.

by knowledge, experience and confidence that Boeing gained through NASA's AST, QAT and Vehicle Systems programmes, and from collaboration with NASA under two Quiet Technology Demonstrator programmes which tested noise reduction technologies developed under the AST, QAT and Vehicle Systems programmes.[3365] The European Communities argues that the aeronautics R&D subsidies created and accelerated the development and application of the health management systems, allowing Boeing to better monitor the health of different parts on the 787, as well as leading to lower maintenance costs on the 787, and providing improved maintenance service.[3366]

7.1604 The European Communities argues that the knowledge and experience that Boeing (and McDonnell Douglas) gained through their work under the NASA contracts and agreements and DOD contracts and agreements provided Boeing (and McDonnell Douglas) with a solid foundation of tangible technologies, as well as knowledge, experience and confidence, which Boeing was able to further develop into an optimal combination of technologies for the 787.[3367] According to the European Communities, even when the technologies applied to the 787 are not the same as those studied under the contracts and agreements with NASA and DOD, the knowledge, experience and confidence that Boeing derived from its work for NASA and DOD provided Boeing with the insight to assess the validity of different design, manufacturing and assembly solutions, and ultimately to come up with the 787 design.[3368] In this sense, the European Communities argues that the Panel should assess the overall, cumulative knowledge effect of Boeing's participation in the NASA and DOD programmes, which according to the European Communities, Boeing was able to leverage in its own related R&D activity.[3369]

Effects of the subsidies on Boeing's pricing behaviour with respect to the 737NG, 777 and 787

7.1605 In its first written submission, the European Communities identifies 11 categories of subsidies which it argues have affected Boeing's pricing behaviour. These categories are: (i) B&O tax reductions provided by the State of Washington and the City of Everett; (ii) waiver of 747 LCF landing fees; (iii) FSC/ETI federal tax exemptions/exclusions; (iv) tax breaks and other incentives provided by the State of Washington and municipalities therein; (v) tax breaks and bond interest payments provided by the State of Kansas and municipalities therein; (vi) reimbursements, tax breaks and grants provided by the State of Illinois and municipalities therein; (vii) aeronautics R&D support provided by NASA, DOD and DOC; (viii) intellectual property rights waivers/transfers provided by NASA and DOD; (ix) IR&D and B&P reimbursements provided by NASA and DOD; (x) facilities, equipment and employees provided by NASA and DOD; and (xi) worker training grants provided by DOL.[3370]

7.1606 The European Communities estimates that the total amount of subsidies in the above categories that benefited Boeing's LCA division between 1989 and 2006 was $19.1 billion. In

[3365] European Communities' first written submission, Annex C, paras. 100, 103-104.
[3366] European Communities first written submission, para. 1350. European Communities' first written submission, Annex C, paras. 110 - 121.
[3367] European Communities' confidential oral statement at the second meeting with the Panel, para. 8.
[3368] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 76.
[3369] Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), paras. 23, 27; Statement of Tim Sommer and Dominik Wacht, Exhibit EC-1336 (BCI), para. 27.
[3370] European Communities' first written submission, paras. 1233-1278.

addition, the European Communities estimates that Boeing will receive approximately $4.6 billion in subsidies between 2007 and 2024.[3371]

7.1607 The European Communities argues that the Panel should examine the cumulative effects of all of the subsidies.[3372] According to the European Communities, all of the subsidies have a significant nexus with the price effects at issue, in the sense that all of the subsidies have the effect of freeing up cash for Boeing to use to reduce the prices of its aircraft, and it is therefore appropriate to aggregate all of the subsidies for purposes of assessing their price effects.[3373] However, the European Communities has also grouped the above-referenced categories of subsidies into two general categories for purposes of analyzing their effects on Boeing's prices.

7.1608 The first general category consists of subsidies that the European Communities alleges operate to reduce Boeing's marginal unit costs of production and sale of individual LCA.[3374] The European Communities asserts that subsidies within this category operate to lower the taxes and fees paid by Boeing with respect to the production and sale of its LCA, and that the receipt of these subsidies is essentially contingent on the production and sale of individual LCA.[3375]

7.1609 The second general category consists of subsidies that the European Communities argues operate to increase Boeing's non-operating cash flow.[3376] The European Communities notes that subsidies within this category are not linked to production of particular families of Boeing LCA, or to the production or sale of individual LCA.[3377] The European Communities argues that these subsidies are "fungible" and should therefore be treated as the functional equivalent of additional cash flow available to Boeing's LCA division.[3378] Subsidies within this category account for approximately

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[3371] This figure comprises estimates of the future values of the following categories of subsidies: (i) B&O tax rate reductions provided by the State of Washington and the City of Everett; (ii) waiver of 747 LCF landing fees; (iii) tax breaks and other incentives provided by the State of Washington and municipalities therein; (iv) tax breaks and bond interest payments provided by the State of Kansas and municipalities therein; (v) reimbursements, tax breaks and grants provided by the State of Illinois and municipalities therein; (vi) intellectual property rights waivers/transfers provided by NASA and DOD; and (vii) worker training grants provided by DOL; Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17, p. 2.

[3372] European Communities' first written submission, paras. 1070-1073.

[3373] European Communities' second written submission, paras. 669, 671.

[3374] European Communities' first written submission, para. 1233. The alleged subsidies said to operate in this manner are the Washington State and City of Everett B&O tax reductions, Snohomish County 747 LCF landing fee waivers, and federal FSC/ETI tax exemptions/exclusions; European Communities' first written submission, para. 1306.

[3375] European Communities' first written submission, para. 1234.

[3376] European Communities' first written submission, paras. 1244-1278. Alleged subsidies falling within this category are (i) the aeronautics R&D funding and support provided by NASA, DOD and DOC; (ii) intellectual property right waivers/transfers provided by NASA and DOD; (iii) IR&D and B&P reimbursements provided by NASA and DOD; (iv) the facilities, equipment and employees provided by NASA and DOD; (v) the remaining tax breaks and other incentives provided by the State of Washington and municipalities therein; (vi) the tax breaks and bond interest payments provided by the State of Kansas and municipalities therein; (vii) the reimbursements, tax breaks and grants provided by the States of Illinois and municipalities therein; and (viii) the worker training grants provided by DOL; European Communities' first written submission, para. 244.

[3377] European Communities' first written submission, para. 1279. The European Communities explains, however, that it considers that certain of the subsidies within this second general category; e.g. the "R&D grants provided through NASA's ACT program" "specifically relate, in whole or in part, to the development and production of the 787 family of LCA"; European Communities' first written submission, para. 1277; European Communities' second written submission, para. 702. The amounts represented by these subsidies are allocated to the 787 as part of ITR's calculation of the per-aircraft subsidy "magnitudes"; International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Table 7.

[3378] European Communities' first written submission, para. 1279.

$16.9 billion of the total $19.1 billion in subsidies that the European Communities alleges was received by Boeing between 1989 and 2006.

7.1610 The European Communities' key argument is that, notwithstanding the fact that the majority of the subsidies at issue in this dispute are not directly related to Boeing's production of LCA, Boeing's receipt of subsidies of the magnitudes alleged in this dispute, in the light of the strategic incentives that result from the particular market structure of the LCA market, and Boeing's financial condition, make it reasonable to infer that the subsidies do in fact affect Boeing's LCA pricing behaviour.[3379] The European Communities argues that the combination of "LCA market factors and dynamics of production" supports a finding that the subsidies to Boeing, even if not explicitly targeted to lowering the costs of production of specific LCA models, nonetheless cause adverse effects to the interests of the European Communities, because they allow Boeing to market its LCA at lower prices than would otherwise be the case.[3380] The European Communities contends that, under the "right conditions of competition – such as the intense duopoly competition existing in the LCA markets – non-price or non-production-contingent subsidies *can* confer the ability to cause adverse effects"[3381] and that "certain tied subsidies may yield similar effects as certain unrestricted subsidies, depending on the context of the specific subsidy at issue; i.e. the specific nature of the subsidy and its magnitude, as well as on the condition of the recipient".[3382]

7.1611 The European Communities has presented various formulations of its analytical framework for evaluating the effects of the subsidies on Boeing's pricing behaviour. Almost all of these formulations refer to the same key factors. These factors are: (i) the nature of the subsidies, in terms of their structure, design and operation; (ii) an economic model developed by Professor Luís Cabral concerning the effect of what he refers to as "development subsidies", which purports to quantify the degree to which Boeing was able to reduce its LCA prices in 2004 – 2006; (iii) the subsidy amounts and "magnitudes"; (iv) the conditions of competition in the LCA markets; (v) the financial condition, or "economic viability" of Boeing's LCA division in the absence of the subsidy amounts; and (vi) selected individual LCA sales campaigns in each of the three LCA product markets, which are alleged to demonstrate the serious prejudice in terms of Airbus' prices and sales.

7.1612 As to the nature of the subsidies at issue, the European Communities argues that the extent to which a particular subsidy enables Boeing to lower its LCA prices depends on the way in which it operates in an economic sense. The European Communities argues that subsidies that operate to reduce Boeing's marginal unit costs have an effect on Boeing's LCA pricing that is commensurate with their amount.[3383] In other words, the European Communities argues that, for each additional dollar of such subsidies, Boeing is able to reduce the prices of its LCA by an equivalent dollar.

[3379] For example, the European Communities argues: "{T}he nature of the subsidies, combined with their amount and in light of the conditions of competition in the LCA markets, cause adverse effects"; European Communities' second written submission, para. 786; "The availability of {the} magnitude of subsidies for Boeing to price down its LCA in competitive campaigns against Airbus, combined with the nature of those subsidies, Boeing's ability and incentive to use them, as well as other evidence … supports the conclusion that they cause significant price suppression, significant lost sales, and market share displacement or impedance"; European Communities' response to question 78, para. 305.

[3380] European Communities' first written submission, para. 1303.

[3381] European Communities' non-confidential oral statement at the second meeting with the Panel, para. 107.

[3382] European Communities' response to question 379, para. 435.

[3383] European Communities' first written submission, para. 1306. According to the European Communities, this conclusion is supported by standard economic literature showing that cost-reducing subsidies have a 100 per cent pass-through in competitive markets as well as other evidence relating to the effects on Boeing's prices of the FSC/ETI subsidies, and of cost reductions arising from productivity improvements; European Communities' first written submission, paras. 1307-1308, Steven Landsburg, Price Theory and its

BCI deleted, as indicated **[***]**

7.1613 The European Communities argues that subsidies that operate to increase Boeing's non-operating cash flow, on the other hand, although not directly tied to production or sales of specific aircraft, also strongly influence Boeing's pricing and investment decisions.[3384] In support of this contention, the European Communities refers to Professor Cabral's economic analysis of the effects on Boeing's LCA pricing of "development subsidies".[3385] Professor Cabral posits that subsidies that are not directly tied to production or sales volume are essentially fungible with cash and would be used by Boeing to (i) distribute to shareholders; (ii) invest in the development of new aircraft; and (iii) "invest" in capturing market share and moving along the learning curve through "aggressive" pricing of new and existing models of LCA.[3386] Professor Cabral conducts an economic modelling exercise which purports to *quantify* the relative proportion of untied subsidy amounts that Boeing would devote to additional investment (in lower pricing of its aircraft and in additional R&D) rather than to payments of dividends to shareholders.[3387] Based on this allocation, Professor Cabral estimates the total annual dollar value of LCA price reductions that have been made possible by the alleged receipt of $19.1 billion in subsidies between 1989 and 2006, for the years 2004 through 2006. Professor Cabral also calculates these annual price reductions in terms of price reductions for the specific Boeing LCA models over the 2004 -2006 period. According to Professor Cabral, the total of $19.1 billion in subsidies allegedly received by Boeing between 1989 and 2006 translates into the following "price effects", or price reductions per model of Boeing aircraft in 2004 – 2006: [3388]

Aircraft model	**Per-aircraft "price effect" ($ thousands)**		
	2004	**2005**	**2006**
737 Family	1,009	879	949
767 Family	1,443	1,248	1,354
787 Family	1,539	1,332	1,445
777 Family	2,324	2,010	2,169

Applications, South-Western College Publishing, Cincinnati, Ohio, Exhibit EC-725; European Communities' response to question 289, paras. 612-625.

[3384] European Communities' first written submission, para. 1309.

[3385] Professor Cabral describes "development subsidies" as subsidies that are not directly tied to production and sales volume; Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 2-3.

[3386] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 29, 31; see also, European Communities' first written submission, para. 1313.

[3387] European Communities' first written submission, para. 1321. According to Professor Cabral, Boeing would allocate each extra dollar of untied subsidies in the following manner: 15 cents to dividends to shareholders; 59 cents to "aggressive pricing" of new LCA and sales of new or existing LCA to new buyers; and 26 cents to additional research and development.

[3388] The European Communities generally uses the term "price effects" to refer to the extent to which Boeing has been able to lower its LCA prices as a result of the subsidies. For example, see European Communities' first written submission, para. 1306, where the European Communities submits that the subsidies that directly reduce the marginal unit costs of Boeing LCA "have a price effect commensurate with their amount… {e}ach of these subsidy dollars has the effect of reducing the price of a Boeing LCA by exactly $1". However, the European Communities also uses this term in a narrower sense, to refer to Professor Cabral's quantification of the amount of subsidy dollars used directly and immediately by Boeing to "aggressively price" its LCA, based on his analysis which treats all subsidies that are not tied to the production of additional units of LCA as fungible with cash (i.e. equivalent to additional non-operating cash to Boeing), and assumptions about the optimal investment strategy of a company like Boeing given the particularities of the LCA market (learning curve, switching costs etc.). For example, see European Communities' first written submission, para. 1332 and figures 22 and 23 (which are the same as the "price effects" calculations made by Professor Cabral in EC-4, Tables 7 and 8).

BCI deleted, as indicated **[***]**

7.1614 The European Communities also argues that, in addition to operating to either reduce Boeing's marginal unit costs of production and sale of additional LCA, or to increase Boeing's non-operating cash flow, the subsidies are also "structured" and "designed" to increase Boeing's competitiveness vis-à-vis Airbus, or to increase Boeing's market share at Airbus' expense.[3389]

7.1615 As to the subsidy amounts and "magnitudes", the European Communities estimates that the $19.1 billion in subsidies that it alleges Boeing's LCA division received between 1989 and 2006 translates into a subsidy "magnitude" of $5.1 billion over the 2004 – 2006 period.[3390] Moreover, the European Communities estimates that over the 2004 – 2006 period, "Boeing's LCA division enjoyed, on average, $1.7 billion per annum in benefits from US subsidies" which it contends translates into an average of $2.4 million per each 737NG, $4.6 million per each 787 and $5.5 million per each 777 sold during that time.[3391] The European Communities argues that "the size of these subsidies alone suggests that they cause Boeing to change its commercial behaviour in the LCA markets".[3392] However, the European Communities also argues that to properly appreciate the importance of the subsidy "magnitudes", the Panel should consider the "magnitude" figures in the context of the conditions of competition in the LCA markets, and in terms of LCA orders from all LCA sales campaigns, as well as from only "competitive" LCA sales campaigns.[3393]

7.1616 The per-LCA subsidy "magnitudes" to which the European Communities refers are primarily based on the total subsidy amounts that the European Communities alleges that Boeing's LCA division received between 1989 and 2006 (i.e. $19.1 billion) (i) *allocated over time* (with the addition of an "opportunity benefit" to reflect the time value of the funds to Boeing); and (ii) *allocated across the various models of Boeing LCA* (based on aircraft ordered during the allocation period). In other words, the European Communities' annual subsidy "magnitude" estimates represent an allocation of the $19.1 billion total subsidy "amount" which it alleges was received by Boeing's LCA division between 1989 – 2006, to the 2004 – 2006 period and to the three Boeing subsidized LCA in this

[3389] European Communities' first written submission, paras. 1066, 1227, 1238, 1240, 1243, 1247, 1249, 1251, 1260-1266, 1272, 1274, 1276.

[3390] European Communities' first written submission, para. 1288. The European Communities also estimates the "magnitudes" of the subsidies to Boeing's LCA division for the 2000 – 2003 period, which it contends understate the degree of subsidization, but nevertheless demonstrate that Boeing was highly subsidized in the past and that distortions in the LCA markets from the subsidies to Boeing were persistent even before 2004; European Communities' first written submission, para. 1289 and Figure 17. The Panel notes that the ordinary meaning of the term "magnitude" (and the meaning of the term as used by panels and the Appellate Body) is broader than the specialized sense in which the European Communities uses it (which is described in para. 7.1616 of this Report). The "magnitude" of something is generally understood as a reference to its size, extent, degree, or numerical quantity or value. The European Communities sometimes also appears to use the term "magnitude" in its ordinary sense; e.g. European Communities' comments on United States' response to question 391, para. 356.

[3391] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 142, referring to International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, at para. 2.

[3392] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 142.

[3393] European Communities' first written submission, para. 1298. The European Communities defines a "competitive" sales campaign as one in which both Airbus and Boeing were actively involved, and where Airbus submitted a **[***]**; European Communities' first written submission, para. 1222. Christian Scherer of Airbus conducted a survey of all Airbus and Boeing orders during the 2000-2006 period and has classified them as being orders resulting from competitive, or non-competitive sales campaigns; see Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), Annex I and Annex II. The European Communities' identification of "competitive" sales campaigns is based on Scherer's survey.

dispute.[3394] In addition, as explained in paragraphs 7.155-7.157, the European Communities has included in its calculation of the annual subsidy "magnitudes" between 2004 – 2006, the amounts of recurring subsidies that it estimated Boeing would receive in 2007 – 2009. The calculations were performed by the European Communities' economic consultants, International Trade Resources LLC (ITR).[3395] The European Communities asserts that the methodologies that ITR has used to calculate the subsidy "magnitudes" during the 2004 – 2006 period are based on an allocation principle used by investigating authorities in the United States and European Communities to allocate the full amount of subsidies over imports on an *ad valorem* basis for purposes of assessing countervailing duties.[3396]

7.1617 Set forth below are the subsidy "magnitude" calculations and corresponding subsidization rates made by ITR for the various versions of 737NG, 787 and 777 aircraft on the basis of all orders (i.e. competitive and non-competitive sales):

Magnitude of 737NG Subsidies Per LCA and Subsidization Rates (All Orders)[3397]

	737-600		737-700		737-800		737-900	
Year	**Per-LCA Magnitude**	**Rate**	**Per-LCA Magnitude**	**Rate**	**Per-LCA Magnitude**	**Rate**	**Per-LCA Magnitude**	**Rate**
2004	n/a	n/a	$2,028,144	5.83%	$2,607,614	6.27%	$2,784,674	6.33%
2005	n/a	n/a	$1,908,956	6.06%	$2,454,372	6.50%	$2,621,027	6.55%
2006	$1,812,672	6.54%	$2,076,333	6.48%	$2,669,571	6.97%	$2,850,838	6.97%
Average	$1,812,672	6.54%	$2,004,478	6.11%	$2,577,186	6.57%	$2,752,180	6.61%

[3394] The subsidy programmes at issue and the corresponding "amounts" (i.e. annual benefit to Boeing's LCA division) represented thereby are set forth in a table prepared by the European Communities: Amount of Subsidies to Boeing's LCA Division, Exhibit EC-17. The European Communities has also provided an exhibit (Exhibit EC-1296) summarizing the various ways in which it derives the relevant "amounts" of each of the disputed subsidy measures listed in Exhibit EC-17. The methodology used to calculate the "amount" of benefit accrued by Boeing's LCA division varies according to the type of subsidy measure.

[3395] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13. ITR calculates the following subsidy "magnitudes" over 2004, 2005 and 2006, respectively: for the 737NG: $2.38 million, $2.26 million and $2.45 million per plane; for the 787: $4.51 million, $4.47 million, and $4.72 million per plane; and for the 777: $5.56 million, $5.27 million and $5.54 million per plane; see European Communities' first written submission, para. 1295.

[3396] European Communities' response to question 275, para. 506; European Communities' comments on United States' response to questions 387 and 388, para. 309.

[3397] European Communities' first written submission, para. 1486, Figure 42; International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007 , at para. 2, Table 11, and Table 12, Exhibit EC-13. Subsidization rates are based on average price per family, per year, as derived by ITR.

BCI deleted, as indicated **[***]**

Magnitude of 787 Subsidies Per LCA and Subsidization Rates (All Orders)[3398]

	787-3		787-8		787-9	
	Per-LCA Magnitude	**Rate**	**Per-LCA Magnitude**	**Rate**	**Per-LCA Magnitude**	**Rate**
2004	4,453,362	5.44%	4,453,362	4.99%	5,292,112	5.61%
2005	4,408,130	5.90%	4,408,130	5.41%	5,238,361	5.34%
2006	4,661,172	6.10%	4,661,172	5.62%	5,539,061	5.56%
Average	4,507,555	5.81%	4,507,555	5.33%	5,356,511	5.50%

Magnitude of 777 Subsidies Per LCA and Subsidization Rates (All Orders)[3399]

	777-200ER/-200LR		777-300/-300ER	
	Per-LCA Magnitude	**Rate**	**Per-LCA Magnitude**	**Rate**
2004	$4,904,773	3.95%	$5,996,553	4.32%
2005	$4,652,768	4.14%	$5,688,434	4.52%
2006	$5,120,987	4.48%	$6,260,875	4.86%
Average	$4,892,843	4.18%	$5,981,947	4.56%

7.1618 The European Communities argues that the "magnitudes" of the subsidies benefiting the 737NG, 787 and 777 families of LCA are large enough to have adversely affected the respective Airbus LCA in these markets. The European Communities presents diagrams purporting to depict "counterfactual" analyses of A320, A330 and A340 pricing in the absence of subsidization of the 737NG, 787 and 777, respectively, assuming that Boeing uses all of its subsidy benefits to reduce prices for all ordered aircraft by an identical amount.[3400] The European Communities argues that factoring in the "magnitude" of the subsidies benefiting the 737NG, 787 and 777 (whether viewed in terms of all orders or only orders arising out of "competitive sales campaigns") shows the extent to which the full use of these subsidies has the potential to cause significant price suppression of the competing Airbus' LCA.[3401] The European Communities provides similar "counterfactual" depictions of the subsidy "magnitudes" on Airbus' **[***]** for the A320, A340 and A330.[3402]

[3398] European Communities' first written submission, para. 1378, Figure 26. International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007 , at para. 2, Table 11, and Table 12, Exhibit EC-13. No subsidies are allocated to years in which there was no order of a certain model. Subsidization rates are based on average price per family, per year, as derived by ITR. The seating capacity for the 787-3 is assumed to be the same as the seating capacity for the 787-8.

[3399] European Communities' first written submission, para. 1584, Figure 57; International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007 at para. 2, Table 11, and Table 12, Exhibit EC-13. Subsidization rates are based on average price per family, per year, as derived by ITR.

[3400] European Communities' first written submission, paras. 1396, 1501, 1597.

[3401] European Communities' first written submission, para. 1503.

[3402] European Communities' first written submission, paras. 1501, figure 47; 1401, figure 33; 1597, figure 62. The **[***]**; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), paras. 48-50.

BCI deleted, as indicated **[***]**

A320 Family Pricing and Counterfactual A320 Family Pricing Including US Subsidization Rate for All 737NG Orders[3403]

[***]

Price Per Seat of A330 Family LCA in Constant Dollars, Compared to Magnitude of 787 Subsidies, All Orders, 2004-2006[3404]

[***]

A340 Family Pricing and Counterfactual A340 Family Pricing Including US Subsidization Rate for All 777 Orders[3405]

[***]

7.1619 The European Communities argues that the conditions of competition in the LCA market are such that Boeing has the incentive to use the subsidies to lower its LCA prices in the three LCA product markets, most particularly in so-called "competitive" sales campaigns. The European Communities argues that Boeing would use subsidies to lower its LCA prices in order to increase sales, thereby reducing its marginal production costs, and ultimately, increasing its profitability. The European Communities identifies the following key characteristics of the LCA market which it argues give rise to this pricing incentive: duopoly structure characterized by heavy price and quality competition, increasing returns to scale, a steep learning curve, switching costs for customers, heterogeneous products, customer specific configurations, high order volumes and small batch outputs and the need for a continuous delivery stream.[3406]

7.1620 The European Communities asserts that economic theory indicates that the structure of competition in the LCA industry gives rise to an inherent incentive for each duopolist to "out-price" its rival, either through aggressive pricing or through additional investment in R&D (which it asserts is economically equivalent to aggressive "value-per-unit" pricing).[3407] Moreover, lower LCA pricing is argued to lead eventually to higher profits, because lower prices imply higher market share, and

[3403] European Communities' first written submission, para. 1501, Figure 47. Pricing information in this figure is based on Airbus proprietary data. Estimates of the per-plane magnitude of the subsidies are by ITR.

[3404] European Communities' first written submission, para. 1396, Figure 31. Pricing information in this figure is based on Airbus proprietary data. Estimates of the per-plane magnitude of the subsidies are by ITR.

[3405] European Communities' first written submission, para. 1597, Figure 62. Pricing information in this figure is based on Airbus proprietary data. Estimates of the per-plane magnitude of the subsidies are by ITR.

[3406] European Communities' comments on United States' response to question 391, para. 334.

[3407] European Communities' comments on United States' response to question 391, para. 335, referring to Professor Cabral's explanation that, as investment in additional R&D leads to higher quality aircraft, R&D expenditures lower the effective price of LCA on a "per-value" unit basis, regardless of any increases in nominal LCA prices. According to Professor Cabral, the "per-value-unit" measure of price is the relevant determinant of market demand; Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 72.

higher market share implies faster movement down the learning curve (i.e. lower marginal production costs) as well as the realization of economies of scale and scope. The European Communities argues that, by the same token, one duopolist's increased market share will indirectly result in higher marginal costs to its rival, leading to an effective medium to long-term pay off from lower pricing.[3408]

7.1621 The European Communities also presents a counterfactual analysis of Boeing's financial condition and "economic viability" had it not received an alleged $19.1 billion in subsidies between 1989 and 2006. The European Communities argues that, based on an examination of historical financial information pertaining to the "US LCA industry" (i.e. the LCA divisions of Boeing and, prior to 1997, McDonnell Douglas), it is possible to show that Boeing's LCA pricing and product development decisions were contingent on the receipt of the alleged subsidies because, absent the receipt of $19.1 billion in subsidies over the 1989 – 2006 period, the pricing and product development behaviour of the U.S. LCA industry would have been unsustainable and financially irrational. The European Communities argues, based on material relating to the economic viability of Boeing's LCA division absent $19.1 billion in subsidies, that *but for* the alleged subsidies, Boeing would have been forced to behave differently (i.e. increase its LCA prices and develop new aircraft more slowly), or face complete commercial failure.[3409]

7.1622 The European Communities argues that significant price suppression of Airbus' LCA is reflected in Boeing's pricing activity, including in six individual LCA sales campaigns described in Annex E to its first written submission[3410], three LCA sales campaigns in Annex D to its first written submission[3411] and the 2004 Lufthansa campaign as described in Annex F to its first written submission. In support of the European Communities' allegations that Airbus lost a number of sales in each of the three LCA product markets since 2002, the European Communities points to evidence from five LCA sales campaigns set forth in Annex E to its first written submission[3412], 10 specific LCA sales campaigns in Annex D to its first written submission[3413] and three LCA sales campaigns described in Annex F to its first written submission.[3414] The European Communities alleges displacement and impedance of exports of Airbus' A320 family LCA from the third country markets of Singapore, Indonesia and Japan in the period 2004-2006. As regards the 200 – 300 seat wide-body LCA product market, the European Communities alleges displacement and impedance of imports into the United States of the A330 and Original A350 (as evidenced by the alleged lost sales campaigns involving Continental and Northwest) and displacement and impedance of exports from the third country markets of Japan, Canada, Australia, Iceland, Ethiopia, Morocco and Kenya. In the 300 –

[3408] European Communities' comments on United States' response to question 391, para. 335.

[3409] European Communities' second written submission, paras. 715-732. The European Communities also uses the alternative assessment to rebut one of the principal criticisms of the model developed by Professor Cabral, namely, his assumption that Boeing's access to capital markets is not unconstrained. According to the European Communities, if Boeing can be said to enjoy unconstrained access to the capital markets, this too is an effect of the alleged subsidies. Had Boeing not received the alleged subsidies, the capital markets would not have permitted it to become so highly leveraged and it could not have invested in lower prices and development of new aircraft in the manner in which it did. European Communities' second written submission, para. 760; Luís M. B. Cabral, Response to the U.S. Criticisms of My Analysis of 'The impacts of Development Subsidies Granted to Boeing', 14 November 2007, Exhibit EC-1182, para. 8.

[3410] The sales campaigns in question are: easy Jet (2002); Air Berlin (2004); Iberia (2005); Aegean (2005); Air Asia (2005); Hamburg International (2005).

[3411] The sales campaigns in question are International Lease Finance Corporation (2005), CIT Group (2005) and Air Europa (2005).

[3412] The sales campaigns are: Ryanair (2000 – 2002); Japan Airlines (2005); Singapore Airline Leasing Enterprise (2005); Lion Air (2005) and DBA (2005).

[3413] The sales campaigns are: Continental Airlines (2003-2005); Northwest Airlines (2003-2005); All Nippon Airways (2003-2005); Japan Airlines (2003-2005); Air Canada (2005); Qantas (2004-2005); Icelandair (2005-2006); Ethiopian Airlines (2004-2005); Royal Air Maroc (2004-2005); and Kenya Airways (2005-2006).

[3414] The sales campaigns are: Singapore Airlines (2004); Air New Zealand (2004) and Cathay Pacific (2005).

400 seat LCA product market, the European Communities alleges displacement and impedance of exports from the third country markets of Singapore, New Zealand and Hong Kong.

7.1623 The European Communities also argues that the subsidies benefiting the 737NG, 787 and 777 families of LCA cause a threat of significant price suppression with respect to *future orders* of, respectively, Airbus' A320, A330 and A350XWB-800, and A350XWB-900/1000 families of LCA.[3415] The European Communities argues that the present and future subsidies give rise to a significant likelihood that Airbus will suffer from significant price suppression for the above-referenced families of Airbus LCA, based on the same types of evidence that support its present serious prejudice arguments.[3416]

(ii) United States

7.1624 The United States disputes the European Communities' contentions that Boeing's product development and pricing behaviour was affected by the alleged subsidies. The United States argues that Boeing's product development strategies and pricing were "market driven", that the subsidies in question did not increase Boeing's non-operating cash flow, and that Boeing generated sufficient cash to fund its pricing and product development behaviour. In short, the United States contends that the European Communities has failed to demonstrate that Boeing's commercial behaviour would have been any different in the absence of the subsidies.

7.1625 Set forth below is a description of the United States' rebuttal arguments as to (i) the effects of the aeronautics R&D subsidies on Boeing's development of technologies in relation to the 787; and (ii) the effects of the subsidies on Boeing's pricing behaviour with respect to the 737NG, 777 and 787.

Effects of the aeronautics R&D subsidies on Boeing's development of technologies in relation to the 787

7.1626 The United States advances several arguments in response to the European Communities' arguments that the aeronautics R&D subsidies gave rise to "knowledge effects" that were instrumental in the design, manufacture and timing of the 787.

7.1627 First, the United States argues that the materials and basic manufacturing techniques employed by Boeing on the 787 are commercially available. The United States alleges that global suppliers provide significant components for the 787 and in many cases currently supply those or other components to Airbus.[3417] The United States argues that Boeing's use of commercially available materials and technologies purchased from a global supply network in order to develop and manufacture the 787 underscores the point that there was in fact no "technology gap" that prevented Airbus from making the same decision that Boeing made in 2004; namely, to launch a composite aircraft.[3418] According to the United States, the key strategic technology choice made by Boeing for the 787 was its decision to work with suppliers to leverage their technology and know-how. The United States contends that this is what expanded Boeing's technology base; not the U.S. Government.[3419] In relation to each of the six technology areas in which the European Communities alleges that Boeing was assisted by aeronautics R&D subsidies, the United States describes the

[3415] European Communities' first written submission, para. 1654.

[3416] The European Communities contends that the suppressed prices for the respective Airbus LCA "provide a strong indication" that prices for those LCA will continue to be suppressed in the future.

[3417] United States' first written submission, para. 931; In this regard, the United States notes that Airbus and Boeing both use the following suppliers: Alenia, Goodrich, Vought, C&D Aerospace, GKN, Spirit, Fischer, Fuji, Latecoere, Messier-Dowty, Fokker, SAAB, CAC, HAC and Hawker de Havilland; United States' first written submission, para. 931, footnote 1146.

[3418] United States' first written submission, para. 937.

[3419] United States' first written submission, para. 938.

problem-solving and innovation on the part of Boeing and its suppliers that it alleges were the true causes of the technological advancements on the 787.

7.1628 Second, in relation to the NASA aeronautics R&D subsidies, the United States argues that any knowledge acquired by Boeing through its R&D contracts and agreements with NASA has been widely disseminated throughout the aerospace industry and forms part of a general, globalized pool of industry knowledge.[3420] Moreover, the lessons learned from composites research, in particular, have been disseminated well beyond the aerospace industry, and have informed the development of composite usages in many industries. The United States claims that this is one reason why Boeing has looked to suppliers and partners outside the aerospace industry for useful experience and innovation.[3421] The United States also argues that, although the European Communities makes much of the experience gained by Boeing employees engaged on NASA R&D projects, including those where the technologies were not considered to be feasible, any "lessons learned" by Boeing, including pitfalls to avoid, were accessible by Airbus.[3422] In this regard, the United States notes that the report by Airbus engineer, Dominik Wacht, cites to many of these publicly available research results, and that several of the NASA and DOD conferences to which Wacht refers were conferences which Airbus not only attended, but in which it was an active participant.[3423]

7.1629 Third, the United States argues that the basic research that Boeing conducted for NASA cannot be compared to the degree of technological refinement, testing and investment required for Boeing to develop the 787. In terms of the nature of the NASA-funded R&D, the United States argues that the nature of the research conducted under NASA contracts and agreements is either technologically irrelevant or too early stage and basic to have a commercial impact, and thus did not accelerate Boeing's decision or ability to build the 787.[3424] The United States notes that NASA has typically aimed at technology research from basic principle observation (TRL 1) through component validation (TRL 6).[3425] Moreover, according to the United States, from the cost perspective, NASA R&D funding does not even begin to approach the level required for LCA development, and is insignificant compared to the costs of aircraft development.[3426] The United States here compares the $750 million, which it argues was the amount that Boeing received from NASA under the challenged NASA R&D programmes from 1989 to 2006, with the investment costs associated with developing and launching an aircraft like the 787, including making arrangements to take maximum advantage of supplier expertise. In this regard, the United States notes that Boeing's BCA division spent $2.39 billion in research and development in 2006 *alone*; while it has been reported that Airbus expects to spend $15.4 billion developing the A350XWB.[3427]

7.1630 Fourth, as regards the knowledge effects of alleged DOD aeronautics R&D subsidies, the United States argues that DOD funded-research on aircraft is for military use, designed to fulfil military functions, and gives rise to technologies that are not relevant to commercial civil aircraft, such as stealth technology, flight at supersonic speeds, unmanned flight and the ability to land in harsh environments.[3428] In addition, the United States argues that commercial aircraft production has more stringent certification/maintenance requirements and demands a higher efficiency/production rate than required for military aircraft, meaning that production methods sufficient for military aircraft cannot work for the significantly higher rates of lower-cost commercial aircraft demanded by

[3420] United States' first written submission, para. 931.
[3421] United States' first written submission, para. 947, footnote 1189.
[3422] United States' first written submission, para. 947.
[3423] United States' first written submission, para. 947 and footnote 1191.
[3424] United States' first written submission, para. 932.
[3425] United States' first written submission, para. 946.
[3426] United States' first written submission, para. 943.
[3427] United States' first written submission, para. 943 and footnote 1185.
[3428] United States' first written submission, para. 948.

commercial customers.[3429] The United States contends that, on the contrary, it is technology development within the commercial sector that is proving useful to DOD, and that DOD acknowledges that it relies heavily on industry as a way of accessing innovative technology and knowledge and sharing the costs and associated risks with the commercial sector.

7.1631 In any case, the United States argues that to the extent that DOD-funded technology has a theoretical civil application, it cannot reasonably be used commercially because of U.S. laws and regulations which control the export of all defense articles and services.[3430] The United States here refers to the ITAR which prevents any technologies developed for a military purpose (including items designed, developed, modified or configured for military applications, regardless of the intended end-use of the item) from being exported without a license or applicable exemption.[3431] The United States contends that, because of their military nature, technologies and products developed by Boeing under DOD contracts and agreements are generally subject to the ITAR and require a licence, which is not a commercially feasible proposition for technologies incorporated in LCA which are to be sold to commercial customers around the world. This, coupled with the difficulty of determining the heritage of every item on a commercial aircraft, and the severe financial and commercial consequences of inadvertently violating the ITAR, led Boeing to declare the 787 to be "ITAR-free" and to ensure that only technologies with a documented civil origin were used on the 787. This requirement also applies to Boeing's suppliers, all of whom must certify that all items and technologies supplied are of non-military origin. According to the United States, the consequence is that none of the alleged DOD-funded technologies are on the 787.[3432]

7.1632 Fifth, the United States notes that although the European Communities has sought to support its "technology effects" causation theory by pointing to similarities between research conducted under NASA and DOD programmes and technology applied to the 787, for the bulk of the challenged programmes, the European Communities "does not even find a semblance of a connection to the 787".[3433] The United States argues that, even as regards the NASA R&D programme that the European Communities argues had the clearest relevance to the 787 – the Advanced Technology Composites Aircraft Structures (ATCAS) programme – most of the technologies studied under ATCAS are fundamentally different to the technologies used on the 787.[3434]

7.1633 Sixth, the United States contends that knowledge, experience and confidence are not the "benefit" conferred by an R&D subsidy, but rather are the natural result of engaging in R&D.[3435] In this regard, the United States argues that the European Communities' theory of "technological benefit" goes beyond the boundaries of Article 1.1(b) of the SCM Agreement.[3436] The architecture of the definition of a subsidy in Article 1.1 is such that the extent of the financial contribution that is found to exist sets the upper bounds of any benefit conferred thereby. The United States considers any knowledge, experience and confidence that Boeing derives from doing the research to be the result of undertaking the research with the funds, goods and services provided by the government, just as it would be the result of undertaking research with the same funds, goods and services received from the market. Such knowledge, experience and confidence is therefore not an element of the financial

[3429] United States' first written submission, para. 949. In this respect, the United States contends that using materials developed for military aircraft would require completely redesigning their structural properties to conform to commercial requirements, including safety, comfort and reparability.
[3430] United States' first written submission, para. 951.
[3431] United States' first written submission, paras. 951-952.
[3432] United States' first written submission, para. 953.
[3433] United States' confidential oral statement at the second meeting with the Panel, para. 22.
[3434] United States' confidential oral statement at the second meeting with the Panel, para. 24.
[3435] United States' response to question 275, para. 484.
[3436] United States' comments on European Communities' response to question 373(b), para. 251.

contribution and cannot be part of any benefit thereby conferred.[3437] The United States does not dispute that Boeing gained specific knowledge, experience and confidence from performing R&D in collaboration with NASA and DOD engineers. However, it argues that the European Communities has failed to demonstrate that this knowledge, experience and confidence is a term of the financial contribution that is more favourable than is available in the market.

7.1634 Finally, the United States argues that the European Communities' argument that, through the aeronautics R&D subsidies, the U.S. Government effectively provides Boeing with extra cash that it did not otherwise have to spend to perform the research is at odds with its argument that the result of the government research support is knowledge that Boeing would not otherwise have had.[3438] In other words, the United States argues that it is logically impossible to demonstrate on the basis of a single counterfactual that an R&D subsidy has both "price effects" and "technology effects". According to the United States, a counterfactual analysis of the position absent the receipt by Boeing of the R&D subsidies would be that, *but for* the R&D subsidies, Boeing would have been required to spend additional funds to conduct the R&D that was financed by the subsidies. In this counterfactual world, in which Boeing funded the R&D that was funded by the subsidies, Boeing would still have derived the technologies, knowledge, experience and confidence from the R&D work.

Effects of the subsidies on Boeing's pricing behaviour with respect to the 737NG, 777 and 787

7.1635 The United States argues that the European Communities has failed to demonstrate that the bulk of the subsidies at issue in this dispute is of a nature that would affect the product development or pricing decisions of Boeing. In this regard, the United States disputes the European Communities' argument that the "nature" of the NASA, DOD and DOC "contractual research payments" to Boeing is such that they represent additional operating cash flow which Boeing is able to invest in lower prices and additional R&D to lower its costs of research, development, production and sale of LCA. The R&D programmes that are said to involve contractual research payments to Boeing had no effect on Boeing's non-operating cash flow, and there is no evidence that Boeing's commercial airplanes division would have spent any more for civil aircraft research in the absence of the subsidies. Moreover, even if Boeing would have incurred increased costs, the European Communities has provided no evidence that Boeing's prices would have differed.[3439] The United States also considers that the European Communities' argument that most of the subsidies at issue provide non-operating cash flow in fact means that subsidies within that general category are unlikely to affect Boeing's product development or pricing decisions.[3440] In this regard, a central argument made by the

[3437] United States' comments on European Communities' response to question 373(b), para. 256. The United States argues that the European Communities is essentially asking the Panel to (i) calculate the benefit of funds, goods and services provided to Boeing according to Articles 1.1(b) and 14 of the SCM Agreement based on the adequacy of the remuneration; and then (ii) to double count it, or multiply it by a measure of what Boeing learned as a result of performing the challenged research measures. Yet, when NASA provides the services of employees to outside entities, including Boeing, the "cooperation" with those employees *is* the service provided and the R&D contracts and agreements between NASA and Boeing show that collaboration between the purchaser and supplier of research services is a "term" of such transactions consistent with terms available in the market. The United States argues therefore that Boeing is not "better off" as a result of working with NASA engineers than it would be by performing comparable work with comparable engineers in the marketplace; United States' comments on European Communities' response to question 373(b), para. 255.

[3438] United States' comments on European Communities' response to question 375, para. 264; United States' comments on European Communities' response to question 275, para. 485.

[3439] United States' first written submission, para. 959.

[3440] United States' response to question 370, para 263: "...characterizing an alleged subsidy to a company with unfettered access to capital markets as 'nonoperating cash flow' means that the alleged subsidy is unlikely to affect the recipient's product development or pricing decisions; free cash to a company that has access to capital markets to finance investments it considers worthwhile is, by definition, *not* supply creating or

United States regarding the nature of an alleged subsidy in an analysis of serious prejudice is that the effects of a subsidy depend upon whether or not the subsidy creates supply or maintains supply that would not otherwise exist.[3441] The United States asserts that whether a subsidy is supply-creating or supply-maintaining depends upon whether the subsidy is "tied to" the development, production or sale of a particular product. If a subsidy that is not tied to the development, production or sale of a particular product is provided to a company that enjoys unfettered access to capital markets, it is unlikely to affect product and pricing decisions, unless the subsidy is such that, absent the subsidy, the company would not be economically viable.

7.1636 The United States argues that Professor Cabral's analysis of the effects of the subsidies on Boeing's LCA prices, which it regards as underpinning the European Communities' "price effects" theory, in addition to being based on the European Communities' inflated estimates of the amounts of subsidies received by Boeing's LCA division, rests on assumptions that are contrary to fact and on dubious methodologies that are at odds with sound economic practice.[3442] The United States also argues that the European Communities' general theory as to how the subsidies affected Boeing's LCA pricing behaviour is inconsistent with the empirical evidence concerning pricing activities of Airbus and Boeing in the LCA markets between 2001 and 2006. In this regard, the evidence shows that Boeing's market share losses to Airbus were greatest in the period when the alleged "price effects" of the subsidies calculated by Professor Cabral were supposedly at their highest, thus disproving the European Communities' claim of a link between the subsidies and Boeing's pricing.[3443] According to the European Communities' theory as to how the subsidies would affect Boeing's pricing behaviour, Boeing should have been led to price aggressively when it was losing market share (i.e. in the period 2000 – 2004). However, the *ad valorem* levels of the total alleged "price effects" calculated by Professor Cabral were *declining* through the period when, according to the United States, Airbus' price undercutting compelled Boeing to respond.

7.1637 The United States disputes the European Communities' calculation of the amounts of subsidies received by Boeing's LCA division between 1989 and 2006. The United States argues that the value of any subsidy benefit to Boeing's LCA division is, by any reasonable measure, a tiny fraction of the amount asserted by the European Communities, and is also insignificant relative to the value of the aircraft on which the alleged subsidies have allegedly been paid.[3444]

7.1638 The United States criticizes the European Communities' allocation of the subsidy amount across the various Boeing LCA models to arrive at per-LCA subsidy "magnitudes" and the derivation of alleged *ad valorem* rates of subsidization, both with respect to the relevance and appropriateness of such an allocation methodology in the present context, as well as the bases on which various subsidies

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supply maintaining"; see also, United States' response to question 387, para 278: "In this connection, even accepting the EC's characterization of the alleged nonrecurring subsidies as the equivalent of free cash to BCA, the United States has shown that, by its nature, such free cash (i) is untied to the supply or pricing of any particular Boeing large civil aircraft models, and (ii) would not affect the investment or pricing decisions of a company like Boeing, which does not face significant constraints in its access to capital markets."

[3441] United States' response to question 391, para. 304: "the critical part of the U.S. adverse effects argument is that the most important issue regarding the nature of an alleged subsidy is whether it is supply-creating or supply-maintaining"; United States' response to question 391, para. 306: "The key point of the U.S. argument is that because, with the exception of certain low-value tax programs, the alleged subsidies about which the EC complains are not tied to development, production or sale of any large civil aircraft, they are not in any sense supply-creating and thus had no appreciable impact on market pricing."

[3442] United States' first written submission, para. 954.

[3443] United States' first written submission, para. 713.

[3444] United States' first written submission, paras. 810-812; United States' second written submission, at paras. 171-173.

were allocated, and the *ad valorem* rates were calculated.[3445] The United States' key criticisms of the European Communities' subsidy "magnitude" allocations are, first, that they are not required or justified under the SCM Agreement, and are inconsistent with the European Communities' arguments about how the subsidies function. Moreover, the European Communities' effort to allocate subsidy amounts to specific LCA is arbitrary and contradictory given the European Communities' arguments that the vast majority of the alleged subsidies are subsidies that increase Boeing's non-operating cash flow, and are therefore *not* tied to the development, production or sale of LCA.[3446] Second, the United States notes that in *US – Upland Cotton*, the panel rejected the United States' argument that it was under an obligation to precisely quantify the subsidies at issue in its serious prejudice analysis under Part III of the SCM Agreement.[3447] There is similarly no textual basis in the SCM Agreement for the European Communities' approach of calculating an *ad valorem* rate of subsidization for each type of Boeing aircraft.[3448] Third, the United States questions the relevance of the magnitude calculation, arguing that a simpler and more comprehensible approach would have been to compare the annual subsidy values with the order values for all Boeing LCA in each year.[3449] Moreover, in making the allegation that the magnitude of the subsidies is, of itself, sufficient to demonstrate the causal link between the subsidies and the adverse effects, and in the light of its failure otherwise to show that Boeing's pricing would have been any different without the alleged subsidies, the European Communities has placed the quantification of the alleged subsidies at the center of its adverse effects case.[3450] According to the United States, if the Panel were to agree that a large portion of the value of the European Communities' magnitude calculations is invalid, then "nothing remains of this key element of the European Communities' adverse effects claim, and the Panel should reject the European Communities' adverse effects claim".[3451]

7.1639 As regards the conditions of competition in the LCA markets, and more particularly, the market incentives and other factors that influence Boeing's LCA pricing decisions, the United States submits that Boeing's LCA pricing decisions seek the optimal or "profit-maximizing" price and that, in general terms, Boeing sets it prices at the maximum level that the market will bear.[3452] In setting its LCA prices, Boeing takes into account factors such as: (i) the pricing of Airbus, its competitor; (ii) the strength and elasticity of demand; (iii) Boeing's expectations regarding future market conditions; (iv) Boeing's strategic interests in particular sales campaigns; (v) the implications of a price reduction for future sales and for the residual values of aircraft previously sold; and (vi) changes in Boeing's product-specific fixed and variable costs, as well as in its general costs.[3453] The United States asserts

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[3445] United States' first written submission, paras. 813-822; United States' second written submission, at paras. 174-177.

[3446] United States' first written submission, para. 814; United States' response to question 281, para. 478.

[3447] United States' first written submission, para. 813; Panel Report, *US – Upland Cotton*, at para. 7.1179.

[3448] United States' first written submission, para. 813. According to the United States, the European Communities' CVD-type analysis assumes, rather than proves, its cause and effect conclusion; United States' comments on European Communities' response to question 370, para. 216.

[3449] United States' first written submission, para. 815. The United States does this with respect to FSC/ETI ("the only programme found to be a specific subsidy"), and on that basis, argues that the subsidies have been small and declining in relation to the value of orders since 2000.

[3450] United States' comments on the European Communities' response to question 78, para. 269 at footnote 339. The United States contends that, although a complaining party in an adverse effects case is not required to precisely quantify the amount of the subsidy, the European Communities has organized its case in a way that requires it to demonstrate that it has accurately calculated the amount and magnitude of the alleged subsidies.

[3451] United States' comments on European Communities' response to question 78, para. 268; United States' comments on European Communities' response to question 83, para. 281.

[3452] United States' response to question 86, para. 299.

[3453] United States' response to question 298, para. 522.

that Boeing's decision to **[***]** in 2005 – 2006 was compelled by market conditions in the form of steady market share losses to a competitor that priced aggressively, and was unrelated to the subsidies.[3454]

7.1640 The United States argues that, assuming *arguendo* that the alleged subsidies affect Boeing's non-operating cash flow, the most logical way of assessing the significance of those subsidies is to compare them with Boeing's total non-operating expenditures (rather than revenues) in each year.[3455] In this regard, the United States notes that since 1998, Boeing has effected share repurchases in excess of $14 billion.[3456] The $14 billion in capital returned to shareholders represents funds for which Boeing did not consider that there were more attractive investment opportunities. Based on the European Communities' own theory of causation, the proper counterfactual conclusion is that, in the absence of the alleged subsidies, Boeing would have followed the same pricing practices and pursued the same research objectives that it did, but would have reduced the extent of its share repurchases.[3457]

7.1641 The United States also rejects the European Communities' efforts to demonstrate that Boeing's LCA division would not have been "economically viable" had it maintained the same pricing and product development behaviour in the absence of the subsidies. During the period under consideration, Boeing had excess operating cash flow after it had spent all of the money that it could economically justify on aircraft investments (including research). The United States presents its own analyses of financial data for Boeing's BCA division, which it argues demonstrates that, "even accepting the European Communities' fantastical magnitude calculations, Boeing's profits and cash flow were more than enough to absorb the portions of the Defense Department and NASA budgets that the European Communities wants Boeing to bear".[3458] Moreover, Boeing's internal funds and access to capital markets were more than sufficient to enable Boeing to develop on its own any technology that the European Communities alleges to have been created with government funds.[3459]

7.1642 The United States also refers to the facts of the specific sales campaigns in order to rebut the European Communities' allegations concerning the incentives that Boeing has to use subsidies to price aggressively. Specifically, the United States argues that: (i) Boeing was the incumbent supplier in most of the campaigns and therefore had no incentive to lower its prices, but a strong incentive to respond to Airbus' pricing to retain its customers; (ii) Airbus "systematically" undercut Boeing's prices in order to "flip" the Boeing customer, while the European Communities presents no evidence that Boeing undercut Airbus' price; (iii) once Boeing decided to respond to Airbus' lower pricing (in 2005 and 2006) it recovered market share and profitability, thus demonstrating that its decision to lower its prices was economically rational[3460]; and (iv) although Boeing did share some of its productivity gains in 2005 and 2006 with its customers (i.e. used cost savings to lower its prices and increase market share), it did so while simultaneously increasing its operating margins, suggesting a temporal link between productivity gains (or costs savings), lower LCA prices and increased operating margins.[3461] By contrast, the United States notes that the average annual subsidy amounts over this period (based on the European Communities' estimates) were 11 per cent lower than during 2001 to 2003.

[3454] United States' first written submission, HSBI Campaign Annex, para. 10.

[3455] The United States argues, therefore, that the European Communities use of Boeing's "net earnings" figures is inconsistent with its causation theory; i.e. that the alleged subsidies have a cash flow effect; United States' second written submission, para. 177.

[3456] United States' second written submission, para. 176.

[3457] United States' second written submission, para. 176.

[3458] United States' comments on European Communities' response to question 78, para. 270.

[3459] United States' first written submission, para. 961.

[3460] United States' comments on European Communities' response to question 78, para. 271.

[3461] United States' comments on European Communities' response to question 84, paras. 77-78. The operating margins of Boeing's commercial aircraft division increased from 3.58 per cent to 6.32 per cent to 9.60 per cent in 2004, 2005 and 2006, respectively.

BCI deleted, as indicated **[***]**

(iii) Third parties

Australia

7.1643 Australia considers that it may be relevant to assess the effects of subsidies in terms of the cumulative effects of certain subsidies, as has been advocated by the European Communities. However, in doing so, Australia is concerned that subsidies should only be aggregated where appropriate for an adverse effects claim and that care should be taken to ensure that an appropriate nexus exists between those subsidies, based on the nature of the subsidies, to warrant their aggregation.[3462]

7.1644 Australia considers that it is appropriate for the Panel to consider the nature of the subsidy in assessing the "effect of the subsidy" under Articles 5 and 6.3 and, in this regard, that it is appropriate to allocate over time the alleged non-recurring subsidies in order to assess their effects. [3463] Australia recalls that the April 1985 adopted report of the GATT Committee on Subsidies and Countervailing Measures, entitled Guidelines on Amortization and Depreciation, recognized that "{c}ertain subsidies exist which should be spread over time".[3464] Further, Australia notes that the Appellate Body in *US – Lead and Bismuth II* and *US – Countervailing Measures on Certain EC Products* considered that "an investigating authority may presume that a benefit continues to flow from an untied, non-recurring 'financial contribution'", so long as the presumption was not irrebuttable.[3465] In addition, the implementation panel in *US – Countervailing Measures on Certain EC Products* examined whether a benefit continues to exist and whether subsidization exists and is likely to continue or recur, specifically citing as relevant context Articles 10, 14, 19.4, 21.1and 21.3 of the SCM Agreement and Article VI:3 of GATT 1994.[3466] Australia also considers that the principle that a non-recurring subsidy may be allocated over time is also supported by the decision of the Appellate Body in *US – Upland Cotton*.[3467]

7.1645 Australia agrees with Brazil that the causation analysis should not depend on whether alleged subsidies can be traced through a subsidy recipient's cash flow statements.[3468] While a subsidy may result in lowering a recipient's costs or increasing its revenue, the SCM Agreement does not require such an analysis, either in terms of the existence of a subsidy under Article 1 or in terms of the effect of the subsidy under Article 6.3.[3469] Moreover, the analysis of serious prejudice under Article 5 and Article 6.3 relates to the interests of another Member as assessed by the effects of the subsidy in the market. Therefore, it is the effects enumerated in Article 6.3 (for example, price undercutting,

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[3462] Australia's written submission, para. 66.

[3463] Australia notes that, although Article 6.1(a) of the SCM Agreement has lapsed, the Report by the Informal Group of Experts to the Committee on Subsidies and Countervailing Measures, in clarifying issues for the purposes of Article 6.1(a), recognized that some subsidies need to be allocated over time depending on their nature and that continuing benefits may be conferred; Australia's response to questions, 14 April 2008, referring to recommendations contained in the Report (G/SCM/W/415/Rev.2) which, Australia notes, have not been adopted by the Committee.

[3464] Australia's response to question 17, 14 April 2008. GATT Committee on Subsidies and Countervailing Measures, Guidelines on Amortization and Depreciation, (SCM/64, BISD 32S/154, para. 1).

[3465] Australia's response to question 17, 14 April 2008, referring to Appellate Body Report, *US – Lead and Bismuth II*, para 62; Appellate Body Report, *US – Countervailing Measures on Certain EC Products*, para. 84.

[3466] Australia's response to question 17, 14 April 2008, referring to *US – Countervailing Measures on Certain EC Products* (*Article 21.5 - EC*), in particular paras. 7.165 to 7.171.

[3467] Australia's response to question 17, 14 April 2008, referring to Appellate Body Report, *US – Upland Cotton*, para. 475.

[3468] Australia's response to question 20, 14 April 2008, referring to Brazil's written submission, at para. 66 and Brazil's oral statement, at para. 19.

[3469] Australia's response to question 20, 14 April 2008.

displacement of imports), and not other factors, that should form the basis of the Panel's causation determination.[3470]

Brazil

7.1646 Brazil disagrees with both the European Communities' and the United States' approaches regarding the cumulation of subsidies.[3471] In Brazil's view, in making its findings under Article 6.3(c), the Panel should cumulate the challenged subsidies on the basis of whether they would result in prices lower than those that would have been charged otherwise (the particular "effects-related variable" under consideration). As a first step in this analysis, the Panel should determine whether, on account of their structure, design, and operation, the challenged subsidies tend to press prices downwards by, for example, reducing costs (whether they be research and development costs, production costs, financing costs, selling costs, or any other relevant costs), by freeing up cash flow, or through any other mechanism. In conducting this test, the Panel should bear in mind that there may be cases in which the effects involved overlap.[3472] Brazil also considers that, if the Panel cumulates subsidies in making its findings on price suppression, it should, in order to maintain consistency, cumulate subsidies in making its findings on displacement/impedance and lost sales.[3473]

7.1647 Brazil argues that, if the calculation of the amount of subsidization is not necessary in serious prejudice disputes, the "allocation" or "amortization" over time of alleged non-recurring subsidies is not required to demonstrate whether the "effect" of the subsidies is serious prejudice within the meaning of Articles 5 and 6.3.[3474] Brazil submits that the allocation of the "benefit" resulting from a financial contribution over a particular period may not be a meaningful way of assessing the "effect" of a subsidy for purposes of a serious prejudice dispute and that the relevant allocation period need not necessarily be coincident in time with the effect of a subsidy. Brazil argues that in conducting its serious prejudice analysis, the Panel should consider the conditions of competition in the LCA market.[3475] Boeing and Airbus are the only surviving manufacturers of LCA, and a sale by one is a sale lost to the other. Under these circumstances, adverse effects caused by subsidies are very transparent, with gains to one company corresponding directly to losses by the other.[3476]

7.1648 Brazil further submits that the LCA market is characterized by a small group of customers that place large but infrequent orders involving deliveries of multiple aircraft over extended periods. The useful lives of LCA are also lengthy, extending for up to 20 years or more. This means that, after making a purchase, a customer may not revisit the market to make new purchases for many years. Therefore, subsidies that distort a customer's purchasing decisions have adverse effects that are far greater than in most other sectors.[3477] Brazil also argues that when an airline decides to purchase a subsidized aircraft model within an aircraft family, it will very likely make follow-up orders of the same aircraft model, and an airline that purchases an aircraft model from one producer's aircraft family is more likely to order additional aircraft models from the same family.[3478] Consequently, past

[3470] Australia's response to question 20, 14 April 2008.
[3471] Brazil's written submission, para. 46.
[3472] Brazil's written submission, para. 47.
[3473] Brazil's written submission, para. 48.
[3474] Brazil's response to question 17, 14 April 2008, para. 15.
[3475] Brazil's written submission, para. 24.
[3476] Brazil's written submission, para. 25.
[3477] Brazil's written submission, para. 26.
[3478] Moreover, according to Brazil, an airline that operates aircraft from one manufacturer's family is also more likely to purchase aircraft from a different family produced by the same manufacturer. The reasons include commonality of spare parts, pilot and crew training, special tooling, and ground support equipment, and the fact that airlines tend to order large numbers of aircraft at the same time and to place such orders infrequently; Brazil's written submission, para. 27.

subsidies not only distort the market when the aircraft benefiting from the subsidies are delivered, but they are also likely to affect future aircraft sales.[3479]

7.1649 Finally, Brazil argues that the nature of aircraft production is such that the continued development of new aircraft and technology is necessary to remain competitive, and the launch of new aircraft requires enormous initial investments in research and development, design, engineering, and testing. To recoup this investment and to generate economies of scale in production, a producer must sell a large number of aircraft. Subsidies, including research and development subsidies, significantly distort competition in the LCA market because they enable a producer to reduce the costs and risks of developing and launching new aircraft, divert internal funds to other uses, and otherwise make decisions that are inconsistent with normal commercial considerations.[3480]

7.1650 Brazil submits that, although the European Communities has decided to present its case by using complex economic models and by tracing cash flows in Boeing's financial statements, the Panel should focus in making its findings on a straightforward causation analysis consistent with that adopted by the original panel and the implementation panel in *US - Upland Cotton*.[3481] According to Brazil, subsidies may cause adverse price effects by freeing up cash flow of the subsidy recipient for use in lowering prices. The evidence and methodologies for demonstrating this "cash flow" effect, however, are not specified in the text of the SCM Agreement, and the fact that the subsidies cannot be explicitly traced through the subsidy recipient's cash flow financial statements should not be determinative of causation. Brazil therefore submits that the Panel's findings regarding the European Communities' claims of adverse price effects not be made contingent on whether the evidence of additional cash flow is found in the financial data of the subsidized producer.[3482]

7.1651 Brazil also considers that the Panel should reject the position that a Member can avoid a finding of serious prejudice by characterizing the alleged subsidies as additional cash flow, and by alleging that the "additional cash flow" was directed to uses other than investment in firm value (such as the payment of dividends or repurchase of shares) on the basis of simple correlations between the payment of dividends, for example, and the "additional cash flow".[3483] Even if not used to make investments to increase a firm's value, subsidies may be directed to uses that improve a company's financial situation, with the potential for trade-distorting effects in the market. The approach apparently endorsed by the parties in this dispute, to the extent that it neglects this possibility, would open a loophole in the SCM Agreement and does not reflect an appropriate causation analysis.[3484]

7.1652 Brazil disputes the logic of the U.S. argument that Boeing establishes the price of its aircraft based upon what the LCA market would bear, which suggests, in turn, that Boeing's prices would not

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[3479] Brazil argues for example, that an airline that buys a subsidized Boeing aircraft is less likely to buy an aircraft from Airbus in the future, thus magnifying and prolonging the adverse effects of the subsidies. Brazil's written submission, para. 27.

[3480] Brazil's written submission, para. 28.

[3481] Brazil's oral statement, para. 17.

[3482] Brazil's written submission, para. 66.

[3483] Brazil's oral statement, para. 24. According to Brazil, even if the subsidies consisted of cash or cash-equivalents and were simply redirected to shareholders as dividend payments, these increased dividend payments would send a signal to financial markets of improvement in the company's financial situation and could lower its cost of capital needed for investment. Similarly, if all subsidies were used to reduce a company's debt, which the United States also alleges, this would directly lower a recipient's financial costs and would represent a significant improvement in the company's financial situation at the government's expense. Brazil submits that, when subsidies are used to improve a company's financial situation, they may enable such company to take actions that have trade-distorting effects and that the market would otherwise not allow, such as maintaining inefficient production capacity; Brazil's oral statement, para. 19.

[3484] Brazil's oral statement, para. 20.

have been any different absent the challenged subsidies.[3485] According to Brazil, as long as it is demonstrated that the challenged subsidies can potentially depress or suppress world prices, world prices may be lower or not as high as they would have been otherwise. In this context, Brazil considers that arguing that subsidization has no serious prejudice effects in terms of prices where the recipient firm sets its prices at the going world price neglects the obvious point that, absent subsidization, world prices would have been different and the prices charged by the recipient company would also have been different.[3486]

Japan

7.1653 Japan submits that it is not aware of any textual requirement in the SCM Agreement to allocate a non-recurring subsidy. Japan argues that if allocation were always required, it would lead to an unreasonable result that even a benefit which does not exist is always required to be allocated.[3487]

(b) Preliminary considerations relating to the Panel's evaluation of the European Communities' claim under Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement.

(i) Interpretational and methodological issues

7.1654 Article 5(c) of the SCM Agreement provides:

> " No Member should cause, through the use of any subsidy referred to in paragraphs 1 and 2 of Article 1, adverse effects to the interests of other Members, i.e.:
>
> ...
>
> (c) serious prejudice to the interests of another Member".[3488]

7.1655 Article 6.3 of the SCM Agreement reads as follows:

> "6.3 Serious prejudice in the sense of paragraph (c) of Article 5 may arise in any case where one or several of the following apply:
>
> (a) the effect of the subsidy is to displace or impede the imports of a like product of another Member into the market of the subsidizing Member;
>
> (b) the effect of the subsidy is to displace or impede the exports of a like product of another Member from a third country market;
>
> (c) the effect of the subsidy is a significant price undercutting by the subsidized product as compared with the price of a like product of another Member in the same market or significant price suppression, price depression or lost sales in the same market;
>
> (d) the effect of the subsidy is an increase in the world market share of the subsidizing Member in a particular subsidized primary product or commodity as compared to the average share it had during the previous period of three years and

[3485] Brazil's oral statement, para. 24.
[3486] Brazil's oral statement, para. 24.
[3487] Japan's response to question 17, 14 April 2008.
[3488] Footnotes omitted.

this increase follows a consistent trend over a period when subsidies have been granted".[3489]

7.1656 Article 6.3 of the SCM Agreement provides that serious prejudice within the meaning of Article 5(c) may arise where "the effect of the subsidy" is one of the phenomena described in Article 6.3(a) through (d). Article 6.3, however, does not provide extensive guidance as to the sequence of steps to be followed in assessing whether the effect of the subsidy is displacement or impedance of imports, displacement or impedance of exports, or significant price suppression or lost sales, within the meanings of Articles 6.3(a), (b) and (c), respectively. Although Article 6.3 does not use the word "cause", the Panel considers that the sub-paragraphs of Article 6.3 require the establishment of a causal link between the subsidies in question and the particular form of serious prejudice.[3490] This interpretation of Article 6.3 accords with the ordinary meaning of the terms "arise" and "effect"[3491], and finds contextual support in Article 5(c) and Part V of the SCM Agreement. Article 5(c) provides that no Member should *cause* serious prejudice to the interests of another Member through the use of any subsidy. With regard to Part V, the Panel considers that the fact that the more elaborate and precise "causation" and "non-attribution" language found in its trade remedy provisions has not been expressly prescribed for an examination of serious prejudice under Articles 5(c) and 6.3 of Part III of the SCM Agreement suggests that panels have a certain degree of discretion in selecting an appropriate methodology for determining whether the "effect" of a subsidy is any of the phenomena set forth in Articles 6.3(a) through (d).[3492]

7.1657 The European Communities' serious prejudice arguments focus on the effects of the subsidies on Airbus' prices and sales in the three LCA product markets, through their effects on *Boeing's* LCA prices and product offerings. Indeed, the parties agree that determining whether the effect of the subsidies at issue in the dispute is serious prejudice necessitates an economic analysis of how the subsidies affected *Boeing's* commercial behaviour with respect to the pricing and product development of particular LCA.[3493] Both parties express their views on this issue in the form of counterfactual conditional propositions: the European Communities asserts that, *but for* the alleged subsidies, Boeing's commercial behaviour with respect to the pricing and product development of certain LCA would necessarily have been different.[3494] The United States asserts that Boeing's

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[3489] Footnote omitted.

[3490] See also, Panel Report, *US – Upland Cotton*, para. 7.1341; Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil*), para. 372.

[3491] The ordinary meaning of "arise" in this context is "come into existence or notice; present itself, occur", *Shorter Oxford English Dictionary,* L. Brown (ed.) (Clarendon Press, 2002), Vol. I, p. 116. The ordinary meaning of "effect" in this context is "something accomplished, caused or produced; a result, a consequence", *Shorter Oxford English Dictionary,* L. Brown (ed.) (Clarendon Press, 2002), Vol. I, p. 793.

[3492] Appellate Body Report, *US – Upland Cotton*, para. 436. The Appellate Body in *US – Upland Cotton (Article 21.5 – Brazil*), in discussing the approach to causation and non-attribution taken by the compliance panel in that dispute (in the context of a claim of significant price suppression), noted that "a panel has a certain degree of discretion in selecting an appropriate methodology for determining whether the 'effect' of a subsidy is significant price suppression"; Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 370, quoting from Appellate Body Report, *US – Upland Cotton*, para. 436.

[3493] See, e.g. European Communities' second written submission, para. 646:

"The European Communities agrees with the United States that, in order to cause adverse effects within the meaning of Articles 5 and 6.3, subsidies must cause a change in the commercial behaviour of their beneficiaries to an extent that results in adverse effects ("change in commercial behaviour"). Contrary to the US assertion, however, compelling and credible evidence demonstrates that, but for the US subsidies, Boeing's commercial behaviour today, like in the past, would be very different, in ways that are recognized as causing adverse effects under Articles 5 and 6.3." Footnote omitted.

[3494] European Communities' second written submission, paras. 646, 651.

commercial behaviour with respect to the pricing and product development of the LCA at issue would not have been different in the absence of the subsidies.[3495]

7.1658 The European Communities indicates that it has adopted a "unitary" approach to establishing causation, under which prices, sales, market share and other indicators of competitive harm are not assessed in isolation, but rather as part of an integrated analysis of causation.[3496] The European Communities explains that, under this approach, which it alleges is the same approach to causation as that adopted by the implementation panel in *US – Upland Cotton*, the existence of the particular market effect that is alleged to constitute serious prejudice is not separated from the analysis of the causal relationship between that serious prejudice effect and the subsidies at issue.[3497] The United States does not object to the Panel's use of a "unitary" or "integrated" approach to determining whether the effects of the subsidies are displacement or impedance, significant lost sales or significant price suppression.[3498] However, the United States argues that whatever approach it adopts, the Panel needs to ensure that other factors that may have affected sales volume and prices, and thus the causal link between the subsidies and the serious prejudice factors, are taken into account.[3499]

7.1659 We recall that in *US – Upland Cotton (Article 21.5 – Brazil*), the Appellate Body explained that an analysis of price suppression is counterfactual in nature, and that the adoption by the implementation panel in that dispute of a "but for" approach to examining causation is consistent with the definition of price suppression that had been endorsed by the Appellate Body in the original proceedings.[3500] The Panel proposes to adopt a counterfactual approach to determining whether the "effects" of the subsidies at issue in this dispute are displacement or impedance, significant lost sales or significant price suppression. Consistent with the structure of the European Communities' serious

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[3495] United States' non-confidential oral statement at the second meeting with the Panel, para. 144. The parties agree that a "but for" test is an appropriate and permissible causation *methodology* for determining whether the effects of a subsidy is serious prejudice but that this test is not a legal *requirement* under Articles 5 and 6 of the SCM Agreement. See e.g. European Communities' comments on United States' response to question 390, para. 569:

> "… the United States and the European Communities both agree that the 'but for' test is a methodology, not a standard, and as such not *required* by Articles 5 or 6.3 of the SCM Agreement. That said, both parties agree that, for purposes of assessing the European Communities' serious prejudice claim, the 'but for' test constitutes an appropriate methodology."

United States' comments on the European Communities' response to question 300, para. 596: "The United States and the EC agree that a 'but for' test is a useful framework, but not an obligatory standard, for analysing causation." The United States observes elsewhere that while it "adopted a 'but for' methodology for much of its rebuttal" of the European Communities' claim, "its observations regarding the lack of coincidence between the alleged subsidies and the alleged serious prejudice is not a but/for analysis, but is still relevant to the Panel's evaluation of the EC claims;" United States' response to question 300, para. 537 and footnote 674. Moreover, both Australia and Brazil argue that the "but for" approach is but one methodology that panels may select in order to determine whether there is the requisite causal relationship between the subsidy and its alleged effect; Australia's response to question 20, 14 April 2008, Brazil's written submission, para. 61, Brazil's oral statement, para. 26. Japan similarly notes that there is no text in the SCM Agreement that clearly provides that a "but for" test is required for an analysis of causation under Article 6.3(c) but submits that the "but for" test is an effective methodology that the Panel may select in order to conduct its causation analysis in this dispute; Japan's response to question 20, 14 April 2008.

[3496] European Communities' confidential oral statement at the second meeting with the Panel, para. 54.

[3497] European Communities' confidential oral statement at the second meeting with the Panel, para. 54; referring to Panel Report, *US – Upland Cotton (Article 21.5 – Brazil*), paras. 10.46-10.49, 10.243.

[3498] United States' response to question 295, para. 505.

[3499] United States' response to question 295, paras. 505-506; response to question 300, para. 538.

[3500] Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil*), paras. 370-371, referring to Appellate Body Report, *US – Upland Cotton*, para. 433.

prejudice arguments, we conduct this counterfactual analysis first by examining the effects of the subsidies on Boeing's LCA commercial behaviour (i.e. Boeing's prices and product offerings) and secondly by examining the effects of the subsidies, through their effects on Boeing's commercial behaviour, on Airbus' prices and sales in the specific product markets.

7.1660 We recall further that the Appellate Body has stated that Article 6.3(c) requires a panel to ensure that the effects of other factors on prices do not dilute the causal link between the subsidies and the price suppression.[3501] The Appellate Body also stated, however, that Article 6.3(c) leaves some discretion to panels in choosing the methodology to be used to conduct this assessment of the effects of the so-called "non-attribution" factors.[3502] The Panel agrees with the United States that there is no requirement for panels to undertake a separate analytical step to evaluate potential non-attribution factors, and that it is permissible to adopt an analysis that takes these potential non-attribution factors into account simultaneously with the effect of the subsidies and in the context of conditions of competition affecting the market.[3503] Given that our analysis of the effects of the subsidies occurs in two stages; namely, by commencing with an analysis of the effects of the subsidies on *Boeing's* pricing and product offerings, followed by an analysis of the effects of the subsidies, through their effects on Boeing's pricing and product offerings, on *Airbus'* prices and sales, we will undertake our evaluation of possible non-attribution factors relevant to each stage as a part of our causation analysis at that stage. In other words, in conducting our analysis of whether the subsidies affected Boeing's pricing and product offerings, we will also analyze the effects of other factors that are alleged to have affected that behaviour. Similarly, in analyzing the effects of the subsidies on Airbus' prices and sales, we will consider the effect of factors other than Boeing's pricing and product offerings on Airbus' prices and sales in each of the three product markets.

7.1661 We are also mindful that a counterfactual analysis of causation conducted by way of a "but for" approach does not in itself imply a particular standard of causation. In this regard, the Appellate Body has observed:

> "A subsidy may be necessary, but not sufficient, to bring about price suppression. Understood in this way, the 'but for' test may be too undemanding. By contrast, the 'but for' test would be too rigorous if it required the subsidy to be the only cause of the price suppression. Instead, the 'but for' test should determine that price suppression is the effect of the subsidy and that there is a 'genuine and substantial relationship of cause and effect.'"[3504]

7.1662 In adopting a "but for" approach to our analysis of whether the effects of the subsidies are any of the forms of serious prejudice alleged by the European Communities in the manner which we have outlined above, we will determine whether we are satisfied that there is a genuine and substantial relationship of cause and effect between the subsidy in question and the displacement or impedance, significant lost sales, or significant price suppression, as the case may be.

(ii) The organization of the European Communities' serious prejudice arguments

7.1663 It is important to clarify at the outset the distinction between the European Communities' claim that the subsidies to Boeing cause serious prejudice within the meaning of Articles 5(c) and 6.3(a), (b) and (c) of the SCM Agreement, on the one hand, and the arguments and evidence it presents in relation to the effects of the subsidies in the three LCA product markets, on the other.

[3501] Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 375.
[3502] Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 375.
[3503] United States' response to question 295, para. 506.
[3504] Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, referring to Appellate Body Report, *US – Upland Cotton*, para. 438, and Appellate Body Report, *US – Wheat Gluten*, para. 69.

BCI deleted, as indicated **[***]**

7.1664 The United States at first appears to have understood the European Communities to be making three separate adverse effects claims; namely, that: (i) alleged subsidies to the 737NG cause adverse effects to the A320; (ii) alleged subsidies to the 787 cause adverse effects to the A330, Original A350 and the A350XWB-800; and (iii) alleged subsidies to the 777 cause adverse effects to the A340 and A350XWB-900/100.[3505]

7.1665 However, the European Communities indicates that it is making a single serious prejudice claim, while structuring its arguments and evidence in support of that claim on the basis of three separate LCA product markets.[3506] According to the European Communities, this approach is consistent with the requirement, under Articles 5 and 6.3 of the SCM Agreement, to assess the causal link between the challenged subsidies and the adverse effects based on actual competition. The European Communities argues that, because the causation assessment must be undertaken on the basis of the competitive relationship between particular subsidized products and particular competing products of the complaining Member that are alleged to have been negatively impacted by the effects of the subsidies, the Panel should assess the existence of adverse effects caused by the subsidies on the basis of arguments and evidence concerning competition between Boeing LCA and competing Airbus LCA in the three separate LCA product markets in which they compete.[3507]

7.1666 The United States has since indicated that it does not object to the way in which the European Communities has chosen to structure and present the arguments and evidence in support of its serious prejudice claim. However, the United States argues that by identifying three specific sets of Airbus LCA, each one of which allegedly competes with an allegedly subsidized Boeing LCA in one of three distinct LCA product markets, the European Communities has, in practical terms, based its serious prejudice claim "entirely on the alleged effects of the alleged subsidies on competition within each of these three separate markets".[3508] According to the United States, the arguments and evidence presented by the European Communities concern three distinct Boeing "subsidized products" and the alleged serious prejudice affecting three corresponding distinct groups of Airbus "like products" *on the basis of competition occurring in three distinct LCA product markets.* The United States considers that arguments and evidence structured on this basis are not capable of establishing a single adverse effects claim pertaining to a "single" large civil aircraft market.[3509]

7.1667 The Panel considers that the European Communities is free to structure and present the arguments and evidence in support of its serious prejudice claim in the manner it has chosen. Based on the structure of Article 6.3 of the SCM Agreement, serious prejudice arises where the effect of the subsidy is any one or more of the phenomena described in paragraphs (a) through (d) of Article 6.3.

[3505] United States' first written submission, para. 802.

[3506] European Communities' response to question 63, paras. 220-222. The European Communities also argues that its adverse effects claim is not dependent on its identification of three separate LCA product markets. According to the European Communities, the arguments and evidence equally support findings of serious prejudice (or threat of serious prejudice) to the European Communities' LCA-related interests if the Panel were to assess causation of adverse effects on the basis of alternative market configurations, including a single LCA product market.

[3507] European Communities' response to question 63, para. 220.

[3508] United States' comments on European Communities' response to question 63, para. 218.

[3509] United States' comments on European Communities' response to question 63, paras. 218-219. The United States notes, for example, that the European Communities' allegations regarding displacement or impedance of imports pursuant to Article 6.3(a) pertain to imports of specific asserted "like products" within each of the three asserted product markets. According to the United States, evidence supporting these allegations would not be sufficient to establish displacement or impedance of imports within the meaning of Article 6.3(a) on the basis of a single product market. The United States argues that the European Communities cannot evade its burden under the SCM Agreement to show serious prejudice by grouping products one way for purposes of its claim, and another way for presenting its arguments and evidence; United States' comments on the European Communities' response to question 63, para. 224.

Provided the effect of the subsidy is found to be one or several of the effects described in paragraphs (a) through (d) of Article 6.3, serious prejudice in the sense of paragraph (c) of Article 5 arises, and the complaining Member will thereby establish that the alleged subsidies have caused adverse effects to the interests of another Member, pursuant to Article 5 of the SCM Agreement. We consider that provided the European Communities demonstrates one of the forms of serious prejudice in paragraphs (a) through (c) of Article 6.3 that it alleges in relation to a particular Boeing subsidized LCA and a corresponding Airbus like product (or significant price suppression or lost sales, in the "same market"), it will establish serious prejudice to the European Communities' LCA-related interests for purposes of Article 5(c) of the SCM Agreement.[3510]

7.1668 Moreover, the Panel does not consider that evidence supporting allegations regarding serious prejudice based on competition between a subsidized product and corresponding like product in an identified market will necessarily always be incapable of supporting an allegation of serious prejudice based on competition in a differently delineated market. In our view, much would depend on the delineation of the markets and the scope of the subsidized and like products. This is not a question that can or should be resolved at an abstract or theoretical level. [3511]

(iii) Relevant "markets", subsidized products, like products

7.1669 The parties agree that the market for LCA is a global market geographically.[3512] The European Communities delineates the global LCA market into five separate market segments (or product markets) in which particular families of Boeing and Airbus LCA are alleged to compete. These product markets or segments are based on the specific range and seating capacity of LCA:

- Single-aisle aircraft with a capacity of approximately 100 to 200 passengers in a two-class configuration (or the respective cargo equivalent), and a short to medium range;

- Wide-body aircraft with a capacity of approximately 200 to 300 passengers in a three-class configuration (or the respective cargo equivalent), and a medium to long or ultra-long range;

- Wide-body aircraft with a capacity of approximately 300 to 400 passengers in a three-class configuration (or the respective cargo equivalent), and a long or ultra-long range;

[3510] We recall that Article 7.8 of the SCM Agreement provides that the remedies for contraventions of Article 5 are that the Member "take appropriate steps to remove the adverse effects" or withdraw the subsidy. In our view, the contemplated remedies would relate to the particular subsidies found to have caused the specific forms of serious prejudice, meaning that an adverse effects claim established on a "narrow" basis under Article 6.3 (e.g. subsidization of one Boeing LCA causing serious prejudice to one group of Airbus "like products") would result in a correspondingly "narrow" remedy.

[3511] The Panel notes, however, that the European Communities agrees generally that, as a result of its delineation of the LCA industry into five separate LCA product markets, and its identification of the three "subsidized" Boeing LCA and three sets of corresponding "like" Airbus LCA in three separate product markets for purposes of its claim, it is implicitly requesting the Panel to confine itself to examining the causal relationships among the above-referenced groups of subsidized and like products. According to the European Communities, while the effects of subsidies benefiting one grouping of subsidized Boeing LCA may "spill over" to Airbus LCA competing in a different LCA product market, such spill-over effects are infrequent. The European Communities asserts such infrequency on the basis that "bundled sales" campaigns (i.e. sales campaigns involving the provision of LCA from more than one LCA product market) represent a relatively small total number of LCA sales campaigns (e.g. 5.7 per cent of sales transactions over the 2004-2006 period); European Communities' response to questions 67 and 68, para. 242.

[3512] European Communities' first written submission, para. 1186; United States' first written submission, para. 877; See also Brazil's third party submission, para. 36 and Brazil's oral statement, para. 27.

- Wide-body aircraft with a capacity of 400 to 500 passengers in a three-class configuration (or the respective cargo equivalent), and a long range; and

- Super wide-body aircraft with a capacity in excess of 500 passengers in a three-class configuration (or the respective cargo equivalent), and a long range.[3513]

7.1670 For purposes of its serious prejudice claim, the European Communities focuses on three particular LCA product markets, namely, the 100 – 200 seat single-aisle product market, the 200 – 300 seat wide-body product market, and the 300-400 seat wide-body product market. Within these product markets, the European Communities identifies the following three groups of Boeing "subsidized products" and competing Airbus "like products", respectively: (i) the 737NG family of LCA and A320 family of LCA; (ii) the 787 family of LCA and A330/Original A350/A350XWB-800 families of LCA and (iii) the 777 family of LCA and A340/A350XWB-900/1000 families of LCA.[3514] The United States accepts the European Communities' five-way division of the market as the basis for evaluating the European Communities' serious prejudice claim.[3515] The United States considers that a complaining party is accorded considerable latitude in framing the arguments it makes in support of its claims and submits that, as long as the complainant identifies markets or products that are reasonable and coherent, a panel should accept that definition, and should reject a complainant's proposed definition only if it would make a market analysis impossible.[3516] According to the United States, notwithstanding the "serious flaws" in the European Communities' division of the LCA market into five discrete segments, the subsidized products that it identifies are sufficiently coherent to permit a market analysis.[3517]

7.1671 The Panel is satisfied that the LCA market is a global market geographically. In this regard, we note that Airbus and Boeing actively compete for the business of airlines and leasing companies throughout the world, and receive orders from, and make deliveries to, customers based in almost all geographic areas of the world.[3518] Both Airbus and Boeing display and market their aircraft at air shows that are held around the world and which are attended by a world-wide audience of potential customers and the interested public, while production and support facilities are also situated around the world.[3519] Aircraft financing also occurs on a global level, with financial institutions operating on a global scale.

[3513] European Communities' first written submission, para. 1159; Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, 2 March 2007, Exhibit EC-10, para. 37.

[3514] European Communities' first written submission, para. 1154.

[3515] United States' first written submission, para. 800. However, the United States notes that it accepts this approach "solely as an organizational matter" akin to a stipulation, or simplifying assumption; United States' response to question 71, para. 194.

[3516] United States' first written submission, para. 800, referring to an argument made by the European Communities before the panel in *Korea – Commercial Vessels*; Panel Report, *Korea – Commercial Vessels*, Annex F-1, para. 33 (Oral Statement of the European Communities at the Second Panel Meeting); response to question 71, para. 196.

[3517] United States' response to question 71, para. 194. The United States also argues that, as responding party, it retains the latitude to frame its own arguments, and that the Panel should consider those arguments; United States' first written submission, para. 800, response to question 71, para. 197.

[3518] European Communities' first written submission, para. 1186.

[3519] European Communities' first written submission, paras. 1186 – 1187. For example, the European Communities notes that even though Airbus has its corporate headquarters in Toulouse, France, it has subsidiary headquarters in Washington, D.C., Tokyo, Dubai and Beijing, along with over 160 offices around the world, 16 sites in Europe and an international presence with its network of suppliers and a customer base that spans the globe. According to the European Communities, while Boeing's corporate headquarters are in Chicago, it similarly has subsidiary headquarters in China and Japan and a support team of over 200 representatives based in 65 different countries.

7.1672 The Panel accepts, for purposes of its analysis of the European Communities' serious prejudice claim, the European Communities' delineation of three product markets, as well as its identification of three groups of "subsidized" Boeing LCA which correspond to three groups of Airbus "like" products. In analyzing the European Communities' claims on this basis, the Panel does not suggest that this is the only, or most appropriate way in which to divide the LCA market or to identify the relevant subsidized products and corresponding like products. Rather, the evidence before us indicates that the European Communities' identification of the relevant product markets and subsidized and like products is but one way in which its serious prejudice arguments could be organized. The European Communities has chosen to organize its serious prejudice arguments in this way and the Panel considers that it is reasonable to examine those arguments on that basis.[3520]

7.1673 The European Communities also argues that each of the identified LCA product markets operates in individual country markets as well as a world market geographically.[3521] According to the European Communities, as Articles 6.3(a) and 6.3(b) of the SCM Agreement legally direct panels to assess the evidence of displacement or impedance on the basis of certain country markets, panels assessing claims under these two provisions are required to limit the geographic scope of the markets to the territorial boundaries of the countries at issue.[3522] The United States argues that the European Communities has provided the Panel with no evidence to support its argument that the three product markets it has identified can be divided into separate country markets for purposes of Article 6.3(c) of the SCM Agreement.[3523] The United States asserts that LCA producers easily trade LCA across large distances, that barriers between buyers and sellers are low, and that prices for a sale in one country routinely affect prices for subsequent sales in other countries (factors which point generally to the existence of a global LCA market). According to the United States, a party asserting the existence of a country market for large civil aircraft would have to provide an explanation as to why these sorts of conditions of competition do not preclude the existence of smaller, discrete markets such as country markets.[3524]

7.1674 Although the European Communities argues that "each LCA product market also operates within individual country markets, including the US market and various third country markets"[3525] it does not confine its arguments concerning the existence of significant price suppression or significant lost sales, within the meaning of Article 6.3(c) of the SCM Agreement, to any individual country market.[3526] Therefore, the Panel will assess the European Communities' arguments concerning the

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[3520] The Panel notes in this regard Brazil's arguments that the Panel should afford substantial discretion to the European Communities as complaining party to define the "subsidized product" to which its claims apply, and that, provided the European Communities identifies the "like products" corresponding to the "subsidized products" in accordance with footnote 46 of the SCM Agreement, the Panel should not "second-guess" the complainant; Brazil's third party submission, paras. 31-33, Brazil's oral statement, para. 22.

[3521] European Communities' first written submission, para. 1151.

[3522] European Communities' response to question 65, para. 232.

[3523] United States' first written submission, para. 877.

[3524] United States' first written submission, para. 878.

[3525] European Communities' first written submission, para. 1190. The European Communities notes that the panel in *US – Upland Cotton* considered that the existence of a world market does not preclude the existence of other relevant geographic markets within the world market. Panel Report, *US – Upland Cotton*, paras. 7.1247-7.1248. The European Communities refers to the following factors in support of its argument that each LCA product market operates within individual country markets: (i) evidence contained in Annexes D, E and F to its First Written Submission, which it asserts illustrates that LCA sales campaigns take place within individual countries; (ii) the fact that airline and leasing companies have "identities" associated with individual countries; (iii) the fact that since 2000, Airbus and Boeing have received orders from customers in 75 and 70 different countries, respectively; and (iv) the fact that airline order and delivery data can also easily be broken down by any country; European Communities' first written submission, para. 1191.

[3526] The European Communities indicates that its arguments concerning the existence of significant price suppression and significant lost sales in each of the three LCA product markets are based on those markets

existence of significant price suppression and significant lost sales on the basis that each of the three LCA product markets have a worldwide geographical scope. The Panel recalls that Article 6.3(a) and Article 6.3(b) expressly direct us to conduct our examination of displacement and impedance on the basis of national markets; either the market of the subsidizing Member for purposes of Article 6.3(a), or third country markets for purposes of Article 6.3(b). In so doing, the Panel is not required to consider whether the European Communities has established the existence of such country markets. Rather, the question for the Panel is whether, based on evidence of sales occurring in those countries, the Panel is satisfied that there has been displacement and impedance of imports or exports within the meaning of Article 6.3(a) and 6.3(b), respectively in any of the three LCA product markets in the particular country market.

7.1675 We note that the European Communities also submits, "in the alternative", that in addition to world and individual country LCA markets, each LCA sales campaign be considered an LCA market.[3527] The Panel agrees with the United States that the concept of a "market" for purposes of Article 6.3(c) of the SCM Agreement requires more than the coming together of a buyer and a seller to consummate a transaction, as such a definition would hold true for almost every transaction in the world, and would reduce the concept of a "market" to a nullity.[3528] We therefore decline to examine the European Communities' serious prejudice arguments on the basis that an individual LCA sales campaign can itself constitute a relevant "market" for purposes of Article 6.3 of the SCM Agreement.

(iv) Issues pertaining to the temporal scope of the European Communities' claim

7.1676 The next issue that we address concerns the appropriate period of time over which the Panel should assess the existence of "present" adverse effects, and whether, in making that assessment, the Panel can take into account evidence and data pertaining to earlier periods.

7.1677 The European Communities argues that Articles 5 and 6.3 of the SCM Agreement require that it establish a prima facie case of *present* adverse effects caused by the challenged subsidies under present conditions of competition. According to the European Communities, this demonstration necessitates the assessment of a causal link between the subsidies and *present* adverse effects during a "reference period".[3529] The European Communities requests that the Panel assess the existence of present adverse effects over the period 2004 to 2006.[3530]

7.1678 The United States argues that, given the allegations of subsidization from 1989 onwards and the fact that product development cycles in the LCA industry often last decades, the correct approach is to take a longer-term perspective on the European Communities' serious prejudice allegations and market developments.[3531] The United States submits that an "objective assessment" of the matter as required by Article 11 of the DSU requires the Panel to select a "reference period" that is long enough to enable it to distinguish between developments that were the result of the business cycle and those

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being world markets geographically, European Communities' confidential oral statement at the first meeting with the Panel, para. 91.

[3527] European Communities' first written submission, para. 1193. The European Communities argues that individual LCA sales campaigns involve buyers (i.e. airlines and leasing companies) and sellers (i.e. Airbus and Boeing) coming together to agree upon prices and terms for a commercial transaction involving the sale of LCA. According to the European Communities, these individual LCA sales campaigns therefore constitute "markets" for purposes of the European Communities' serious prejudice claims under Article 6.3(c) of the SCM Agreement.

[3528] United States' first written submission, para. 885.

[3529] European Communities' first written submission, para. 1074; non-confidential oral statement at the first meeting with the Panel, para. 126.

[3530] European Communities' non-confidential oral statement at the first meeting with the Panel, para. 126.

[3531] United States' comments on European Communities' response to question 370, para. 203.

that were related to other factors.[3532] The United States argues that the 2004 – 2006 period proposed by the European Communities does not permit the Panel to make an objective assessment of the matter before it as is required by Article 11 of the DSU [3533] and that the 2001 – 2006 period is the shortest period that would enable the Panel to discharge its obligations in accordance with Article 11 of the DSU.[3534]

7.1679 In our view, while the European Communities as complaining party is able to identify the period of time over which it requests the Panel to assess the existence of serious prejudice, it may not restrict the temporal scope of evidence that the Panel may consider in making that assessment. In accordance with the requirement of Article 11 of the DSU to make an objective assessment, the Panel should evaluate the European Communities' serious prejudice claim on the basis of all of the evidence presented to it, including evidence pertaining to periods prior to 2004, giving due weight to that evidence in terms of its context, relevance, and probative value. Accordingly, in evaluating whether the European Communities has demonstrated that the effects of the subsidies at issue is present serious prejudice within the meaning of Article 6.3 of the SCM Agreement, the Panel will assess whether the European Communities has demonstrated the existence of serious prejudice within the period 2004 to 2006 identified by the European Communities. However, the Panel will not limit the temporal scope of the evidence that it considers in undertaking that assessment, and therefore will take into account all of the relevant evidence submitted in this dispute.[3535]

(v) Use of order and delivery data

7.1680 The Panel next considers the parties' arguments concerning the point in time at which the particular forms of serious prejudice may be said to arise, and the type of data that is relevant to demonstrating the existence of a particular form of serious prejudice; namely, data pertaining to LCA "orders" as opposed to data concerning LCA "deliveries".

7.1681 The European Communities argues that orders, as opposed to deliveries, are most relevant for assessing the impact of the subsidies on Airbus. According to the European Communities, sales are won or lost when orders are placed, and consequently, "significant price suppression, significant lost sales, and displacement and impedance are caused by the US subsidies at the time an LCA order is placed by an airline or a leasing company."[3536]

7.1682 The United States argues that prices at the time of order provide the most appropriate basis for discerning price trends and analyzing the effect of a subsidy on price competition between Airbus and Boeing. According to the United States, price competition between LCA mostly occurs in sales campaigns that end with a decision to order aircraft from Airbus or Boeing, and that the price for the purchase of a large civil aircraft is generally determined at that time.[3537] Similarly the United States argues that a "sale" is "lost" at the time when a customer makes a definitive decision to purchase a competitor's aircraft, and that this occurs at the time of order.[3538] In other words, according to the United States, "lost sales" are properly measured at the time of order.

7.1683 However, the United States argues that in assessing claims of displacement or impedance of imports or exports under Article 6.3(a) or 6.3(b) of the SCM Agreement, the terms "imports" and

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[3532] United States' response to question 72, para. 201.
[3533] United States' first written submission, paras. 803, 807.
[3534] United States' response to question 72, para. 201.
[3535] The Panel notes in this regard Japan's submission that the Panel should consider all relevant evidence provided to it, regardless of whether that evidence pre-dates, or post-dates the Panel's establishment; Japan's written submission, para. 10.
[3536] European Communities' first written submission, para. 1214.
[3537] United States' first written submission, para. 890.
[3538] United States' first written submission, para. 897.

"exports" should be understood to refer to actual deliveries of LCA rather than orders. [3539] This is because the ordinary meaning of the terms "imports" and "exports" includes actual articles or things that cross international borders; namely, deliveries.[3540] The United States submits that orders are, at most, contracts for future imports and exports, and that while they may be relevant for an analysis of threat of displacement or impedance, they do not provide any information about imports and exports that have actually occurred.[3541] The United States argues that, by framing its displacement and impedance arguments based on order data rather than delivery data, the European Communities has failed to produce sufficient information to demonstrate the existence of current displacement or impedance.[3542]

7.1684 The Panel considers that the parties' arguments raise two issues. The first concerns the time at which the specific serious prejudice phenomena can be said to exist. For example, does significant price suppression occur only at the time at which an LCA is ordered, does it occur at the time the LCA is actually delivered (which the parties agree is, on average, three years after the order), or does the phenomenon continue from order until delivery? The European Communities submits that sales of LCA occur at the time of order, and thus, that the subsidies at issue in this dispute cause adverse effects at the time of order, which is when a price-suppressed, lost, displaced or impeded sale takes place.[3543] However, the European Communities also argues that those adverse effects also continue over a number of years commencing with the time of order, as Airbus' revenues are affected by deliveries of aircraft at significantly suppressed prices, and lost revenues from aircraft that are not delivered due to lost, displaced and impeded sales.[3544]

7.1685 The Panel recalls that LCA are purchased through long term contracts that are frequently worth billions of dollars, involving deliveries of aircraft over many years. The terms and conditions of purchase (e.g. aircraft specification, net price, discounts, non-price concessions and financing arrangements) are set at the time of order. On signing a purchase agreement, customers pay a non-refundable deposit for each aircraft ordered, and the cash flow relating to a specific sale therefore begins with the order of the aircraft.[3545] Following the order there is, in principle, no re-negotiation of the terms and conditions of the purchase contract, and assessment of the profitability of a certain contract prior to delivery, as well as the profit margins actually generated, is based on the terms and conditions established at the time of order.[3546] However, complete payment does not occur until delivery of the aircraft.[3547] Moreover, Airbus and Boeing both provide for escalation of the basic airframe price to account for the time that elapses between negotiation of price at the time of order,

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[3539] Japan agrees with the United States that, at least for purposes of this dispute, the terms "imports" and "exports" within Articles 6.3(a) and 6.3(b), respectively, should be interpreted to refer to actual deliveries rather than orders; Japan's written submission, para. 20. Japan also argues that, in an industry such as the LCA industry, in which there is typically a significant lapse of time between the dates of orders and deliveries, it is not reasonable to interpret the terms "imports" and "exports" as encompassing orders, because of the various factors that may break the link between order and delivery (e.g. the orders are often cancelled, their terms are subject to change prior to delivery, and delivery dates are often postponed for extended periods).

[3540] United States' first written submission, para. 903, referring to *New Shorter Oxford English Dictionary*, p. 889 (export defined as "an article that is exported"), p. 1323 (import defined as "something imported or brought in"), Exhibit US-14.

[3541] United States' first written submission, para. 903.

[3542] United States' first written submission, para. 906.

[3543] European Communities' first written submission, para. 1218.

[3544] European Communities' first written submission, para. 1218.

[3545] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 25. Manufacturers generally rely on the cash flow generated by the non-refundable deposit for production financing.

[3546] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 26.

[3547] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 49.

and delivery of the aircraft. Price escalation factors can significantly increase the purchase price to be paid.[3548] In the Panel's view, the phenomena of "price suppression" and "lost sales" do not begin and end at the time at which an LCA is ordered. Rather, given the particularities of LCA production and sale, these forms of serious prejudice should be understood to begin at the time at which an LCA order is obtained (or an order is lost), and to continue up to and including the time at which that aircraft is delivered (or not delivered). However, the Panel considers that the ordinary meaning of the terms "imports" and "exports" in Articles 6.3(a) and (b) of the SCM Agreement, respectively, suggests that these forms of serious prejudice arise only on delivery of the aircraft to the customer. Therefore, while an order of an aircraft can be considered to represent a future delivery, and in that regard, constitute evidence of a future import or export that will be displaced or impeded, it does not of itself evidence displacement or impedance of imports or exports within the meaning of Article 6.3(a) or 6.3(b) of the SCM Agreement, each of which contemplate the existence of goods which cross borders, and can therefore only arise at the point at which LCA deliveries take place.

7.1686 The second issue that is raised by the parties' arguments concerning orders and deliveries relates to the type of data that is relevant to demonstrating the existence of specific serious prejudice phenomena such as price suppression, lost sales and displacement and impedance of imports and exports. Because we regard price suppression and lost sales to exist from the time an order for LCA is made, up to and including its delivery, data pertaining to both LCA orders and to LCA deliveries will potentially be relevant to demonstrating the existence of significant price suppression and significant lost sales. [3549] As regards displacement and impedance or imports or exports, the Panel considers that the existence of these serious prejudice phenomena can only be definitely established by relevant delivery data. However, as indicated above, orders for LCA represent, by and large, deliveries that will occur some years subsequently. The Panel therefore considers that evidence concerning orders that occurred in 2004 – 2006 is capable of showing that future imports or exports will be displaced or impeded in the future, and therefore the existence of a threat of serious prejudice. The Panel applies these principles to its assessment of the arguments and evidence presented by the parties.

(vi) Overview of the LCA industry

7.1687 The Panel undertakes its evaluation of the European Communities' serious prejudice arguments with the foregoing considerations in mind. Before undertaking that evaluation, we consider that it is useful to provide a short overview of key aspects of the LCA industry, in order to provide relevant factual background to our evaluation of the effects of the subsidies.

7.1688 The main participants in the LCA industry are the LCA airframe manufacturers, the airlines that operate LCA, engine manufacturers that supply engines, and leasing companies that purchase LCA from both manufacturers and airlines and lease them out for operation by airlines. Boeing and Airbus are the two major producers of LCA.[3550] The parties agree that the LCA market is presently a

[3548] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 49.

[3549] Australia argues that the Panel should consider both the status of orders and deliveries. According to Australia, notwithstanding that delivery may not eventuate, orders are an indication of the effect of the subsidies on the industry and the market, through future projected sales and market share. Australia considers that they consequently provide an indication of how current subsidies are likely to affect the market in the future and thus the threat of future serious prejudice; Australia's third party submission, para. 69. Brazil argues that a complainant may satisfy its burden to demonstrate serious prejudice using either order or delivery data, depending on its relevance in the particular circumstances, and that the Panel should refrain from finding that specific forms of serious prejudice under Article 6.3 must be demonstrated using order or delivery data; Brazil's third party submission, paras. 59-60; Brazil's oral statement, para. 28.

[3550] LCA produced by Boeing (including McDonnell Douglas) and Airbus accounted for 90.9 per cent of the world fleet operated as of 31 December 2006; Rod P. Muddle, The Dynamics of the Large Civil Aircraft

duopoly in which both Airbus and Boeing hold a significant share of the market and offer a full line of competitive LCA. Airbus and Boeing each possess a degree of market power, meaning that each manufacturer's decisions regarding the supply and pricing of its products has the ability to influence the pricing of the other, and more generally, the market price for LCA.[3551] Manufacturers of LCA determine both the type and quantity of new LCA produced, although their decisions regarding the type of LCA developed and produced are taken in consultation with major airlines and leasing companies.[3552] The number of LCA ordered and delivered is strictly a function of demand by airlines and leasing companies, as Boeing and Airbus rarely produce speculative LCA.[3553]

7.1689 The customers for new Boeing and Airbus LCA are primarily airlines and leasing companies.[3554] Airlines either purchase LCA outright, finance the purchase of LCA through instruments such as finance leases, or lease the LCA they operate. Airlines can either purchase LCA directly from Boeing or Airbus or acquire used LCA from other airlines or leasing companies. Aircraft leasing companies are also significant actors in the LCA markets.[3555] Leasing companies operate on both the demand and supply sides of the LCA industry. On the demand side, leasing companies are significant purchasers of LCA, accounting for 17 per cent of orders placed with Boeing and Airbus and approximately 25 per cent of Boeing and Airbus deliveries over the period 2000-2006.[3556] On the supply side, leasing companies offer leased LCA to airlines that may not wish to purchase LCA, thus creating an additional source of supply for airlines and an alternative to the direct purchase of new LCA from Boeing or Airbus and the purchase of used LCA from other airlines. As providers of used leased aircraft, leasing companies are significant actors in the used LCA market, buying used aircraft and leasing them to airlines. Prices obtained from Boeing and Airbus by leasing companies can serve as a form of benchmarking on new aircraft prices.[3557]

7.1690 Engines are the single most expensive component of an LCA, representing between 20 and 30 per cent of its total cost. A choice of engines is available for most LCA models, and LCA customers make their engine choice independently from their negotiations with LCA manufacturers. Engine pricing and other features, when negotiated separately between the LCA customer and engine

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Industry, 2 March 2007, Exhibit EC-10, para. 16. Other producers of LCA, such as the Russian manufacturer Tupolev, operate only in certain regions and certain specific product categories and do not account for a significant volume of supply.

[3551] The European Communities states that most airlines that operate LCA are Boeing customers, and provides the following figures: of 764 airlines that operate Airbus and/or Boeing aircraft, 645 operate Boeing LCA, 507 operate only Boeing LCA, 119 operate only Airbus LCA; European Communities' non-confidential oral statement at the second meeting with the Panel, para. 96; Airclaims CASE database, Fleet Summary, data query as of 14 may 2007, Exhibit EC-1311.

[3552] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para 17.

[3553] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 17. Muddle indicates, however, that manufacturers can still influence demand for new aircraft by accelerating or reducing the rate at which airlines replace older, less fuel-efficient aircraft, for example, by offering a fuel-efficient and low priced aircraft.

[3554] A small number of LCA are purchased for corporate or private use.

[3555] Muddle identifies the following leading leasing companies worldwide : International Leasing Finance Corporation (ILFC) ; GE Commercial Aviation Services (GECAS) ; Singapore Aircraft Leasing Company (SALE) ; Aviation Capital Group ; AerCap ; RBS Aviation Capital ; CIT Group ; Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 19.

[3556] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 20. According to Muddle, leasing company sales are especially important for Airbus, with leasing company orders accounting for 20 per cent of Airbus' orders during the period 2000-2006, compared with 14 per cent for Boeing.

[3557] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 26. Muddle notes, however, that prices obtained by leasing companies may not reflect some of the other "non-price" benefits that airlines can receive.

manufacturers, can determine whether Airbus or Boeing wins a sale from an airline or leasing company customer.[3558] In many cases, neither the airline nor the engine manufacturers disclose the terms of the engine contracts to the airframe manufacturer.[3559]

7.1691 The production of large civil aircraft involves heavy upfront development costs, with a return over a considerably longer period. Aircraft are developed over a period of several years with a view to their being sold over a period of 18 years, on average. The marketing life of an aircraft is largely determined by the life of the technology that defines the model. Once the technology has been superseded, the LCA manufacturer will no longer be able to sell the model without making major capital investments to incorporate the latest available technologies.[3560] LCA production is also generally characterized by steep learning curves. [3561] Initial units of a new LCA are produced at a much higher cost than subsequent units will be, once the LCA manufacturer has begun to realize learning curve efficiencies. Learning curve efficiencies are factored into an LCA manufacturer's projected costs at the time of the launch of the new aircraft programme, and manufacturers price initial units of LCA as though they were already at the bottom of the learning curve.[3562] At the time of launch, the LCA manufacturer projects pricing targets for the new aircraft that, over its projected life, must exceed the manufacturer's fully-loaded average production costs by an amount sufficient to justify the investment.[3563]

7.1692 The LCA characteristics demanded by airlines and leasing companies have triggered the development of broadly similar LCA models by Airbus and Boeing. In addition, Airbus and Boeing models are subject to the same rules of physics and economics that largely dictate the design of the aircraft, while operating costs and interior designs of aircraft are similar. Moreover, the costs of manufacture incurred by Airbus and Boeing are increasingly similar and transparent because both manufacturers source material and technology worldwide, often from the same suppliers.[3564]

7.1693 Aircraft acquisitions are not isolated transactions, but rather the key element in an airline's business and strategic plan, and the basis for an airline's commercial success in the marketplace. Thus, every sales campaign involves a unique focus on the needs of the particular airline or leasing company. Such needs, in turn, are informed by the overall business strategy of the airline or leasing company.[3565] In general, the "net flyaway price" of an aircraft consists of the "total aircraft price" less credits and price concessions offered by the LCA manufacturer[3566]; and estimated engine

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[3558] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 28.

[3559] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 31.

[3560] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, para. 11.

[3561] The learning curve refers to the negative correlation between cumulative output and unit cost: the more aircraft of a given type of LCA produced by a firm, the less it costs to produce the next unit of that aircraft; Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 53.

[3562] Jordan and Dorman Report, Exhibit US-3, p. 15.

[3563] United States' first written submission, para. 848.

[3564] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 47.

[3565] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 48; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 43.

[3566] Concessions provided by the engine manufacturers and suppliers of buyer furnished equipment are negotiated between the customer and the supplier, without the direct involvement of the LCA manufacturer. Pricing offered by engine manufacturers and suppliers of buyer furnished equipment can have a significant impact on the net fly-away price in a manner that is largely unknown to the LCA manufacturers; Christian

manufacturer discounts and other discounts offered by suppliers of buyer furnished equipment. The "total aircraft price" in turn, is composed of the basic airframe basic price (catalogue price) plus charges for changes to standard specifications, buyer furnished equipment, supplier furnished equipment and the engine basic list price.

7.1694 In general terms, differences in price, capacity and direct operating cost are the most significant factors that determine the outcome of LCA sales campaigns.[3567] However, the significance of individual factors varies from campaign to campaign, depending on fleet and business plans as well as the strategic goals of the buyers.[3568] Moreover, the value of each factor to an LCA customer may be different than its cost to the LCA manufacturer. During the negotiation phase, customers make extensive technical and economic evaluations of LCA manufacturers' proposals to assess the total cost and anticipated revenue stream (i.e. the overall economic value) presented by a particular proposal. This evaluation involves arriving at an estimate of the present value of costs associated with the acquisition of a new fleet of aircraft (e.g. price, maintenance costs, direct and indirect operating costs, financing, training costs, costs associated with the introduction of new LCA) against the present value of the revenue stream that would be expected to be generated by the proposed fleet. The resultant calculation is the "net present value" (NPV) to the customer of the proposal.[3569] In addition to differences in price, capacity and direct operating cost, various non-price factors generally form part of an overall assessment of the net present value of a particular offer from an LCA manufacturer. Price concessions can offset disadvantages associated with non-price factors. In certain cases, however, offsetting non-price factors through pricing concessions can be very expensive.[3570]

(vii) European Communities' approach to the nature of the subsidies at issue and their consequent effects on the three products at issue

7.1695 The parties agree that the nature of the subsidies plays an important role in an analysis of whether their effects are any of the forms of serious prejudice alleged in this dispute and both refer to statements of previous WTO panels in support of this proposition.[3571] In *US – Upland Cotton*, the panel stated that "{w}e consider it axiomatic that the nature of the United States subsidies at issue – in terms of their structure, design and operation – is relevant in assessing whether or not they have price

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Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 47.

[3567] Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 49; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 43. There is perhaps a difference with respect to purchases by leasing companies. As Scherer notes, unlike airlines, leasing companies own aircraft for financial, rather than operational reasons, and are therefore focussed on price and how that price will relate to leasing rates and profits; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 36.

[3568] Muddle notes further that the importance of the individual factors also varies between airlines purchasing to satisfy their own demand, leasing companies purchasing to satisfy known demand from particular customers, and leasing companies purchasing to satisfy speculative demand; Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, para. 49.

[3569] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 76. According to Scherer, most disadvantages compared with the proposal of the competing LCA manufacturer can be compensated for by providing additional concessions, subject to profitability constraints. Conversely, every advantage over the competitor's proposal can be used to avoid making additional concessions; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), paras. 77-78.

[3570] See Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC-10, paras. 98-102.

[3571] European Communities' first written submission, para. 1064; United States' first written submission, para. 728.

suppressing effects."[3572] In *Korea – Commercial Vessels*, the panel stated "{in} conducting this 'but for' analysis, we will certainly be mindful of the nature of the subsidies alleged to be causing price suppression and price depression."[3573] We agree that it is appropriate to consider the nature of a subsidy in order to properly assess its effects.

7.1696 The Panel considers that it is necessary to structure its analysis in a manner that takes into account the fact that, based on the nature of the subsidies at issue, the European Communities makes a distinction as to the effects of the subsidies on Boeing's commercial behaviour[3574] between the 787, on the one hand, and the 737NG and the 777, on the other.

7.1697 With regard to the 787, the European Communities argues that the nature of the subsidies benefiting Boeing's 787 family reveals that these subsidies have *two principal effects* on Boeing's behaviour. On the one hand, the European Communities argues that *the aeronautics R&D subsidies* have had what the European Communities terms "technology effects" in that they "have helped Boeing develop, launch and produce a technologically-advanced 200-300 seat LCA much more quickly than it could have on its own".[3575] On the other hand, the European Communities argues that *all of the subsidies benefiting the 787* have what the European Communities terms "price effects" in that "they provide Boeing with the ability to charge very low prices for such a technologically-advanced LCA".[3576] These price effects arise because "{e}ach of the subsidies either reduces Boeing's marginal unit costs for its 787 family LCA or increases Boeing's non-operating cash flow".[3577] The European Communities argues that it is through these technology effects and price effects on Boeing's commercial behaviour that the subsidies cause significant price suppression, significant lost sales, and displacement and impedance suffered by Airbus in the 200-300 seat wide body LCA product market.[3578]

7.1698 With regard to the 737NG and the 777, the European Communities argues that the nature of the subsidies benefiting these two Boeing aircraft reveals that they have *one principal effect* on Boeing's behaviour in that *all of the subsidies benefiting these aircraft* have price effects by providing Boeing with the ability to charge lower prices for these aircraft.[3579] These price effects arise because each of the subsidies either reduces Boeing's marginal unit costs for its 737NG and 777 family LCA or increases Boeing's non-operating cash flow.[3580] The European Communities argues that it is through these price effects on Boeing's behaviour that the subsidies cause significant price

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[3572] Panel Report, *US – Upland Cotton*, para. 7.1289.

[3573] Panel Report, *Korea – Commercial Vessels*, para. 7.616.

[3574] It is important to note that the European Communities generally uses the term "effect" of the subsidies to refer to the alleged *impact of the subsidies on Boeing's commercial behaviour*, not the impact of the subsidies on Airbus's sales and prices.

[3575] European Communities' first written submission, para. 1343. See also, European Communities' first written submission, paras. 1335,1345.

[3576] European Communities' first written submission, para. 1343. See also, European Communities' first written submission, paras. 1340, 1347.

[3577] European Communities' first written submission, para. 1340.

[3578] European Communities' first written submission, paras. 1334, 1341, 1376 ("In sum, the nature of the US subsidies for the 787, in terms of their structure, design, and operation, helps reveal that their effects have been to: (1) accelerate Boeing's development, launch, production and future delivery of a technologically-advanced 200-300 seat LCA family; and (2) enable Boeing to significantly reduce its sales prices for 787 family LCA. These effects, in turn, cause significant price suppression, significant lost sales, displacement and impedance, and a threat thereof, in the market for the 787 family and competition Airbus LCA.") .

[3579] European Communities' first written submission, paras. 1471, 1474, 1565, 1568. See also, European Communities' first written submission, paras. 1476, 1489, 1570 and 1587.

[3580] European Communities' first written submission, paras. 1476, 1570.

suppression, significant lost sales, and displacement and impedance suffered by Airbus in the 100-200 seat single-aisle LCA product market and in the 300-400 seat wide-body LCA product market.[3581]

7.1699 In sum, whereas for all three aircraft at issue the European Communities argues that the subsidies have caused serious prejudice through their impact on Boeing's ability to charge lower prices for its aircraft (price effects), it is only with respect to the 787 that the European Communities argues that certain subsidies at issue also cause serious prejudice through their impact on Boeing's development of technologies (technology effects). The Panel first examines, in subsection (c)(i) below, whether the *aeronautics R&D subsidies* at issue have caused serious prejudice to the interests of the European Communities by reason of their effects on Boeing's development of technologies for the 787. The Panel then examines, in subsection (c)(ii), *with respect to all three aircraft at issue*, whether *all of the subsidies* at issue have caused serious prejudice to the interests of the European Communities in that they have had price effects either by reducing Boeing's marginal unit costs for particular aircraft or by increasing Boeing's non-operating cash flow.

7.1700 We recall that we have found that the total amount of subsidies at issue in this dispute is at least $5.3 billion.[3582] Of that amount, approximately $2.6 billion relates to the NASA aeronautics R&D subsidies, while $2.2 billion represents the amount of the FSC/ETI subsidies. Given that these subsidies comprise the vast majority of the total subsidy amount, we consider the effects of these subsidies first. Accordingly, our analysis begins with an evaluation of the effects of the NASA aeronautics R&D subsidies, as part of our consideration of the effects of the aeronautics R&D subsidies more generally, followed by an evaluation of the FSC/ETI subsidies, as part of our consideration of the effects of the tax subsidies that are alleged to operate to reduce Boeing's marginal unit costs of production and sale of individual LCA.

(c) Evaluation

(i) Whether the aeronautics R&D subsidies cause serious prejudice to the interests of the European Communities by reason of their effects on Boeing's development of technologies in relation to the 787

7.1701 The Panel recalls that our serious prejudice analysis includes the following measures which we have found to constitute specific subsidies: (i) R&D procurement contracts, assistance instruments and Space Act Agreements with Boeing and McDonnell Douglas that were funded under eight NASA R&D programmes[3583]; and (ii) assistance instruments with Boeing and McDonnell Douglas that were funded under various programmes under the the DOD RDT&E Program.[3584] The

[3581] European Communities' first written submission, paras. 1474, 1484 ("In sum, the nature of the US subsidies for the 737NG, in terms of their structure, design, and operation, helps reveal that their effect is to enable Boeing to significantly reduce its sales prices for 737NG family LCA, thereby causing significant price suppression, significant lost sales, displacement and impedance, and a threat thereof, in the market for the 737NG family and competing Airbus LCA."), 1568, 1582 ("In sum, the nature of the US subsidies for the 777, in terms of their structure, design, and operation, helps reveal that their effect is to enable Boeing to significantly reduce its sales prices for 777 family LCA, thereby causing significant price suppression, significant lost sales, and a threat thereof, in the market for the 777 family and competing Airbus LCA.")

[3582] See para. 7.1433 of this Report.

[3583] These programmes are: Advanced Composites Technologies (ACT) Program, Advanced Subsonic Technology (AST) Program, Research and Technology Base (R&T Base) Program, High Speed Research (HSR) Program, Computational Aerosciences Project (CAS) of the High Performance Computing and Communications (HPCC) Program, Aviation Safety Program, Quiet Aircraft Technology (QAT) Program, and Vehicle Systems (VSP) Program.

[3584] As noted in para. 7.1114 of this Report, the European Communities has challenged funding related to "dual use" technologies allegedly provided to Boeing under 13 "general aircraft" programmes, and under 10 "military aircraft" programmes

Panel has found that not all of the challenged DOD R&D measures constitute specific subsidies. Specifically, the Panel has found that DOD's R&D procurement contracts with Boeing funded under the RDT&E programmes are properly characterized as purchases of services falling outside the scope of Article 1.1(a)(1).[3585] In conducting its analysis of the effects of the DOD subsidies in accordance with Articles 5 and 6.3 of the SCM Agreement, the Panel is aware of the need to ensure that it considers the effects only of those DOD measures that it has found constitute specific subsidies. The European Communities has, for the most part, presented its serious prejudice arguments regarding the effects of the DOD measures on the basis of the specific DOD "project elements" or programmes under the RDT&E Program, without distinguishing between effects which are attributable to procurement contracts under those programmes and those which are attributable to assistance instruments. While there is evidence on the record linking specific assistance instruments to funding provided through particular RTD&E programmes, there is insufficient evidence of the effects of those assistance instruments as distinct from the effects of the RDT&E programmes (including the effects of procurement contracts funded under those programmes) more generally. However, as noted at paragraph 7.1148 of the Report, the ManTech and DUS&T programmes had the explicit objective of developing "dual use" R&D and were predominantly funded through cooperative agreements or other assistance instruments.[3586] In these circumstances, the Panel considers that it is highly likely that the effects of the ManTech and DUS&T programmes pertain to the effects of assistance instruments funded through those programmes. The Panel is unable to make a similar assumption in relation to the arguments and evidence concerning the effects of the other RDT&E programmes, on the one hand, and the effects of assistance agreements funded under those programmes, on the other. The Panel considers that there is insufficient evidence on the record that those other RDT&E programmes funded predominantly assistance instruments, as opposed to procurement contracts, or a mixture of assistance instruments and procurement contracts. The end result is that the European Communities has not advanced sufficient argument or evidence regarding the effects of assistance instruments funded through RTD&E programmes other than in relation to the ManTech and DUS&T programmes.

7.1702 The European Communities argues that overall, *but for* the aeronautics R&D subsidies, (i) Boeing could not have launched, in April 2004, a 787 family of LCA offering the many operating cost savings and enhancements in passenger comfort that have made it such a commercial success relative to the A330 and Original A350[3587]; and (ii) Boeing could not have contractually bound itself to make significant deliveries of the 787 starting in 2008.[3588] The European Communities considers that the most important of the technical characteristics of the 787 that are "derived from US Government-supported aeronautics R&D subsidies" are its composite fuselage, composite wing and composite manufacturing tools and processes.[3589] In evaluating the merits of these arguments, the Panel will focus primarily on the material pertaining to research conducted by Boeing and McDonnell Douglas under the aeronautics R&D programmes in the field of composites, and the composites technologies applied to the 787, particularly under the ACT, AST and R&T Base programmes, which appear from the evidence to be the most commercially and technologically significant programmes in this regard.

[3585] See paras. 7.1171 and 7.1187 of this Report.

[3586] See also United States' response to question 321, para. 22. We note that the United States has identified two procurement contracts that were funded under the ManTech Program; United States' response to question 321, para. 22 at footnote 32. The effects of these procurement contracts have not been taken into account in the Panel's assessment of the effects of assistance instruments funded through the ManTech Program.

[3587] Rather, according to the European Communities, it would have taken Boeing "years longer" as well as much more of its own money to do so; European Communities' first written submission, Annex C, para. 199.

[3588] European Communities' first written submission, Annex C, para. 199.

[3589] European Communities' first written submission, para. 1351. See also, European Communities' first written submission, para. 750, and Annex C, para. 188. The United States refers to composites technology as "the centerpiece of the EC's technology arguments", United States' first written submission, para. 17.

BCI deleted, as indicated **[***]**

7.1703 The Panel has carefully reviewed the evidence before it regarding the nature of the U.S. federal aeronautics R&D subsidies. The Panel considers that, viewed together with other contextual factors, this evidence supports the argument of the European Communities that these subsidies have had "technology effects" in relation to the 787 and have, through this route of transmission, caused serious prejudice within the meaning of Articles 5 and 6.3 of the SCM Agreement. We explain the basis for that conclusion below.

7.1704 The Panel considers that its analysis of the nature of the U.S. federal aeronautics subsidies at issue needs to be viewed in the context of their overall policy objectives. Numerous statements on record demonstrate that a key objective of these subsidies was the enhancement of the competitiveness and increase of the market share of the U.S. industry, and Boeing in particular, vis-à-vis its international competitors.[3590]

7.1705 For example, NASA's Langley Director has stated:

> "The reason there is a NASA Langley and the other aeronautics centers is to contribute technology to assure the pre-eminence of U.S. aeronautics. When Boeing brings out a flagship product like the 777, that uses as many products of NASA technology as are on this plane, it reaffirms the reason that we exist and is very gratifying to us."[3591]

7.1706 The U.S. Congressional Budget Office for its part observed:

> "The National Aeronautics and Space Administration (NASA) funds the development of technology and systems intended for use in commercial airliners – both subsonic and supersonic – with the explicit objective of preserving the U.S. share of the current and future world airliner market."[3592]

7.1707 More specifically, as regards the ACT Program, a NASA Contractor Report makes the following observations regarding the benefits from NASA funding:

> "World dominance in transport aircraft sales by US. industry is threatened by foreign competitors. The lower left corner of Figure 2-1 shows the European consortium, Airbus Industrie, has captured market share at the expense of US manufacturers. Boeing has remained the only US. aircraft manufacturer to meet the Airbus challenge without loss of market share. US. government research funding, such as the NASA ACT program, helps Boeing and other US. aircraft manufacturers to develop advanced technology and remain competitive in world markets.
>
> ...
>
> Boeing is the world's largest producer of commercial transport aircraft, maintaining a market share of over 57% for the world and over 80% for the United States. This provides a large benefit to the US. economy. Approximately 75% of Boeing sales are exports, helping to reduce the US. trade deficit. Every $1 billion in US airplane sales

[3590] The Panel recalls that in the context of its analysis of whether the NASA R&D measures at issue constitute purchases of services it has found that a principal purpose of NASA's aeronautics R&D in general, and of the eight aeronautics programmes at issue, is to transfer technology to U.S. industry with a view to improving U.S. competitiveness vis-à-vis foreign competitors.

[3591] Video clip of Langley Director Dr. J.F. Creedon on visit of Boeing 777, Langley Research Center, LV-1998-00023, Exhibit EC-287.

[3592] Reducing the Deficit: Spending and Revenue Options, Congressional Budget Office, March 1997, Exhibit EC-307, p. 152.

> creates about 30,000 labor years of work, of which 87% is performed in the US. The Boeing Commercial Airplane Group has spent up to $10 billion a year on goods and services produced by over 5,000 suppliers throughout the United States (see Figure 2-2). Maintenance of the United States aircraft industry's market position is critical for the preservation of high paying skilled jobs, a capable industrial base, and balance of trade."[3593]

7.1708 As regards the AST Program, Wesley L. Harris, NASA Associate Administrator for Aeronautics, stated that "NASA's objective in the Advanced Subsonic Technology (AST) program is to provide U.S. industry with a competitive edge to recapture market share, maintain a strongly positive balance of trade, and increase U.S. jobs."[3594] A NASA contractor report also stated that it evaluates the long-term success of the AST Program in terms of, among other things, "how well it contributes to an increased market-share for U.S. civil aircraft and aircraft component producers".[3595] A study commissioned by NASA of the impact of Integrated Wing Design technologies provides estimates of increases in U.S. manufacturers' sales revenues expected to result from those technologies.[3596] Regarding the R&T Base Program, NASA has stated that this program is "critical to technological pre-eminence in the worldwide aerospace market" and that the goals of this programme are "driven by the need to reduce product costs and capture increased market share".[3597]

Structure and design of the aeronautics R&D subsidies

7.1709 The aeronautics R&D subsidies are structured as multi-year R&D contracts which are funded through specific aeronautics R&D programmes. The aeronautics R&D programmes have what might be described as overall objectives or purposes, which are sought to be achieved through the attainment of specific technical objectives. The R&D subsidies that comprise the programmes reflect the objectives of the R&D programmes through which they are funded, and to that end, specify their own objectives as well as more specific technical performance goals. The Panel summarizes below evidence regarding the design of the aeronautics R&D programmes at issue. The Panel's review of this evidence shows that NASA consistently and pervasively expresses the objectives of, and motivations behind, its aeronautics R&D programmes in terms of promoting the competitiveness of the U.S. aeronautics industry through technology development leading to superior and lower cost products. The particular areas covered by these R&D programmes appear to have been selected on the basis of their likely contribution toward the commercial development of technologies that were viewed as being of particular strategic importance to the enhancement of the competitiveness of the U.S. industry. Closely related to this, the evidence shows that the R&D was often undertaken at the behest of and in close collaboration with the U.S. industry. While the research performed by Boeing under the NASA R&D programmes was not undertaken directly in the context of the development and production of particular civil aircraft, the NASA R&D programmes aimed at enhancing Boeing's ability to develop technology for commercial purposes.[3598]

[3593] Advanced Technology Composites Fuselage – Program Overview, pp.2-1-2-2, Exhibit EC-330.

[3594] Statement of Wesley L. Harris, NASA Associate Administrator for Aeronautics, before the House Subcommittee on Technology, Environment, and Aviation, 10 February 1994, Exhibit EC-359, p. 5.

[3595] Eileen Roberts et al., Aviation Systems Analysis Capability Executive Assistant Development, NASA/CR-1999-209119, Logistics Management Institute, March 1999, Exhibit EC-358, p.1-1.

[3596] Abel A. Fernandez, An Impact Analysis of a NASA Aeronautics Research Project: The Integrated Wing Design Project, Exhibit EC-31.

[3597] NASA R&T Base Budget Estimates, FY 2002, Exhibit EC-398, SAT 4.1-4,; NASA R&T Base Budget Estimates, FY 1996, Exhibit EC-398, SAT 4-4.

[3598] The Panel emphasizes that because the NASA R&D programmes at issue are clearly linked to industrial and commercial objectives, the R&D programmes at issue do not involve "fundamental research" that until 1 January 2000 was "non-actionable" under the provisions of Article 8 of the SCM Agreement.

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Advanced Composites Technology Program

7.1710 In 1988, NASA launched the ACT Program as a major new programme for composite wing and fuselage primary structures. [3599] The programme was aimed at developing materials, structural mechanics methodology, design concepts and fabrication procedures that offered the potential to make composite structures cost-effective compared with aluminium structures. NASA's ACT Budget Estimates for 1997 described the goal of the ACT Program in the following manner:

> "{T}o increase the competitiveness of the U.S. aeronautics industry by putting the commercial transport manufacturers in a position to expand the application of composites beyond the secondary structures in use today to wings and fuselages by the end of this decade. Industry's resistance to using composites is one of economics. While the current demonstrated level of composites technology can promise improved aircraft performance and lower operating costs through reduced structural weight, it does so with increased manufacturing costs, currently twice the cost of aluminium. The goal of this program is to verify composite structure designs that will have acquisition costs 20-25% less and weigh 30-50% less than an aluminium aircraft sized for the same payload and mission".[3600]

7.1711 Fifteen contracts were awarded by NASA by the first quarter of 1989 to participants that included commercial and military airframe manufacturers (e.g. Boeing, McDonnell Douglas and Lockheed Corporation), materials developers and suppliers, universities and government laboratories.[3601] The ACT Program established primary research teams in the specific technical areas of automated fibre placement, RTM/stitched technologies and textile preforms. Each of these technical areas had a lead airframe contractor: Boeing (Automated Fibre Placement),[3602] McDonnell Douglas (RTM/Stitched)[3603] and Lockheed (Textile preforms).[3604] In addition, various organizations supported generic R&D that was initiated early in the programme.[3605]

[3599] The European Communities identifies NASA's ACT Program, including its continuation through the AST Program and the R&T Base Program as *the most important U.S. government programme* that contributed to Boeing's development of composites technologies for the 787; European Communities' first written submission, Annex C, para. 26. Emphasis added.

[3600] NASA ACT Budget Estimates, FY 1989-FY 1997, Exhibit EC-321, at FY 1997, SAT 4-21.

[3601] John G. Davis, Jr., Overview of the ACT Program, in John G. Davis, Second NASA Advanced Composites Technology Conference, NASA Conference Publication 3154, 4-7 November 1991, Exhibit EC-810, p. 8.

[3602] Other members of the AFP research team were Hercules, Stanford University, University of Utah, NASA Langley Materials Division and NASA Langley Structural Mechanics Division; John G. Davis, Jr., Overview of the ACT Program, in John G. Davis, Second NASA Advanced Composites Technology Conference, NASA Conference Publication 3154, 4-7 November 1991, Exhibit EC-810, p. 8.

[3603] Other members of the RTM/Stitched research team were Dow Chemical, NASA Langley Materials Division and NASA Langley Structural Mechanics Division; John G. Davis, Jr., Overview of the ACT Program, in John G. Davis, Second NASA Advanced Composites Technology Conference, NASA Conference Publication 3154, 4-7 November 1991, Exhibit EC-810, p. 8.

[3604] Other members of the textile preforms research team were Grumman, Rockwell International, BASF, NASA Langley Materials Division, NASA Langley Structural Mechanics Division and NASA Langley Structural Dynamics Division; John G. Davis, Jr., Overview of the ACT Program, in John G. Davis, Second NASA Advanced Composites Technology Conference, NASA Conference Publication 3154, 4-7 November 1991, Exhibit EC-810, p. 8.

[3605] These organizations were University of Utah, Sikorsky, University of California-Davis, University of Delaware, Northrop, and various NASA divisions; John G. Davis, Jr., Overview of the ACT Program, in John G. Davis, Second NASA Advanced Composites Technology Conference, NASA Conference Publication 3154, 4-7 November 1991, Exhibit EC-810, p. 8.

BCI deleted, as indicated **[***]**

7.1712 The contract awarded to Boeing formed the Advanced Technology Composite Aircraft Structures (ATCAS) element of the ACT Program.[3606] The primary objective of ATCAS was "to develop an integrated technology and demonstrate a confidence level that permits the cost- and weight-effective use of advanced composite materials in primary structures of future aircraft with the emphasis on pressurized fuselages".[3607] The contract awarded to Douglas Aircraft Company (subsequently McDonnell Douglas) formed the Innovative Composite Primary Structures (ICAPS) element of the ACT Program.[3608] The overall objective of this contract was to develop and demonstrate technology to manufacture composite primary structures for transport and fighter aircraft representing 1990 technology.[3609]

7.1713 The ACT Program formally ended in 1995, in the early stages of Phase C of the programme. Phase C of the programme had been envisaged as the designing, building and testing of major components of the airframe and the demonstration the technology readiness for applications in the next generation of subsonic commercial transport aircraft. Although the ACT Program ended in the early stages of Phase C, funding for advanced composites research related to a composite fuselage continued from 1996 to 2000 under the "Materials and Structures" element of NASA's R&T Base Program, while funding for advanced composites research related to composite wings continued from 1996 to 1999 under the "Composites" element of NASA's AST Program.[3610]

Advanced Subsonic Technology Program

7.1714 As explained above, following the termination of the ACT Program in 1995, NASA continued funding the composite wing aspects of that research programme (i.e. ICAPS) through a newly initiated composites element that had been added to the AST Program in 1995.[3611] The element of the AST Program relevant to the European Communities' arguments regarding the aerodynamics and structural design of the 787 is the Integrated Wing Design project (IWD). The element of the AST Program relevant to the European Communities' arguments regarding the "more-electric" architecture of the 787 is the "Fly-by-Light/Power-by-Wire"(FBL/PBW) project and in particular, the

[3606] In a 1997 NASA Contractor Report, Boeing describes the ATCAS programme as having been initiated in 1989 as NASA Contract NAS1-18889; an integral part of the NASA sponsored ACT initiative. The report then describes Task 2 of Materials Development Omnibus Contract (NASA Contract NAS1-20013) which was awarded in 1993, as extending the ATCAS work. The report states that these two contracts addressed Phases A and B relating to concept selection and technology development. An additional contract (NASA Contract NAS1-20553, referred to as Phase C) was initiated to verify the technology at a large scale; L.B. Ilcewicz et al., Advanced Technology Composite Fuselage—Program Overview, NASA Contractor Report 4734, April 1997, Exhibit EC-808, para. 2-0.

[3607] L.B. Ilcewicz et al., Advanced Technology Composite Fuselage—Program Overview, NASA Contractor Report 4734, April 1997, Exhibit EC-808, para. 4-1.

[3608] The ICAPS Program was implemented as NASA Contract NAS1-18862 with McDonnell Douglas Corporation regarding Innovative Composite Aircraft Primary Structures, 31 March 1989, Exhibit EC-331.

[3609] Specific objectives included (i) development and demonstration of innovative woven/stitched fibre preforms and resin matrix impregnation concepts for transport wing and fuselage structures; (ii) demonstration of advanced tow placement processes for transport fuselage structures; and (iii) demonstration of the use of thermoplastic materials with advanced manufacturing techniques for fighter aircraft fuselage structures.

[3610] NASA ACT Budget Estimates, FY 1989-FY 1997, Exhibit EC-321, at FY 1997, SAT 4-21.

[3611] The FY 1996 NASA AST Budget Estimates state that, in 1996, based on the technology developed in the recently completed Phase B of NASA's ACT Program, the new AST composites element will accelerate the effort to validate the application of composites to commercial transport wings by completing the baseline aircraft and requirements document for composite airframes, candidate materials identification, along with cost and weight trade and sensitivity issues; NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1996, SAT 4-42.

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Power-by-Wire subtask (PBW).[3612] The element of the AST Program relevant to the European Communities' arguments concerning the noise reduction technologies on the 787 is the noise reduction element of the AST Program.

7.1715 The initial goal of NASA's AST Program was to accelerate the development of key, high-payoff technologies to maintain the performance/cost advantage of U.S. subsonic transport aircraft in the world market, and to ensure their efficient and safe operation in the National Airspace System.[3613] NASA's Budget Estimates for 1998 indicate that one of the indicia of success of the programme is how well NASA contributes to "technology readiness that will enable U.S. manufacturers to capture a larger share of the world market for civil aircraft".[3614]

7.1716 The objective of the composites element of the AST Program was described as being "to develop and verify at full-scale the composites structures technology, including verification of design concepts, structural materials and manufacturing methods, required for joining composite wings to composite fuselages while saving weight and cost compared to conventional metal commercial transports".[3615] By 1996, the objectives for the composites element of the AST Program were described as follows:

> "The aircraft industry's resistance to using composites is one of economics. While the current demonstrated level of composites technology can promise improved aircraft performance and lower operating costs through reduced structural weight, it does so with increased manufacturing costs, currently twice the cost of aluminium. The goals of the composites element are to reduce the weight of civil transports by 30-50% and their cost by 20-25% compared to today's metallic transports. This translates into a potential 16% direct operating cost-savings to the airlines and increases the competitiveness of the U.S. built transports. In cooperation with industry and the FAA, research is performed to validate the technology for the application of new composites manufacturing techniques, such as through-the-thickness stitching and resin transfer moulding, textile preforms and advanced fiber placement, on transport wings".[3616]

7.1717 NASA described the goals of the IWD project in the following manner:

> "Current approaches to the aerodynamic design of commercial transport rely on methods that develop the design of various wing components independently, which results in an aerodynamic design cycle that is both long and expensive. New design methodology is being developed that treats the wing aerodynamic technologies and components in an integrated manner. To accomplish this, research is being conducted in test/measurement techniques and the aerodynamic disciplines of high-lift, propulsion/airframe integration, wing design and laminar flow control. New concepts, design methodologies, model fabrication and test techniques are being

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[3612] Fly-by-light means replacing the current fly-by-wire control systems with lightweight, highly reliable fiber optical systems that eliminate the concerns of electromagnetic interference associated with fly-by-wire. Power-by-wire involves replacing hydraulics with an electrical power actuation system.

[3613] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1993, RD12-27.

[3614] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1998, SAT 4.1-30.

[3615] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1995, SAT 4-33.

[3616] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1996, SAT 4-38. In 1997, this objective was modified to recognize industry's concern not just with the comparative costs of composites, but also the robustness and reparability of composites. In addition, the weight and cost reduction targets were modified as follows: reduce the weight of civil transports by 10-30 per cent and their cost by 10-20 per cent, translating into a potential five per cent direct operating cost-savings to the airlines; NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1997, SAT 4-37.

> developed to provide industry an integrated capability to achieve increased aircraft performance at lower cost. In addition, the new methodologies will be integrated into a design and testing process that reduces the aerodynamic design cycle time by 25%."[3617]

Further, in 1997, NASA stated that the integrated design and test procedures would:

> "{P}rovide an overall reduction in the total aircraft development time of one year compared to an established 1995 baseline product development cycle time. In addition, the new design and test procedures will be used to deliver validated, highly efficient wing designs for cruise and low-speed operation which include the effects of propulsion system integration. This will yield a 4-per cent reduction in Total Airplane Operation Costs (TAROC) relative to established 1995 baseline technology levels." [3618]

7.1718 The FBL/PBW subtask of NASA's AST Program aimed to develop a more-electric systems architecture for civil aircraft. More specifically, it aimed "to develop and demonstrate the technology for a more-electric secondary power system and to provide enough confidence in this technology through testing that the airline industry will begin to transfer this technology into the civil fleet".[3619] NASA AST Budget Estimates indicate that the general goal of the FBL/PBW subtask of the AST Program was to provide lightweight, highly reliable, electromagnetically immune control and power management systems for advanced subsonic civil transport aircraft.[3620]

7.1719 The noise reduction element of the AST Program was a focused technology programme for developing noise reduction technologies for the U.S. commercial aircraft industry to enhance its competitiveness to meet national and international environmental requirements and to facilitate market growth.[3621] The noise reduction element was designed to develop noise reduction technology for source noise reduction, nacelle aeroacoustics, engine/airframe integration, interior noise, and flight procedures to reduce airport community noise, while maintaining high efficiency via systematic development and validation of noise reduction technology.[3622]

7.1720 The NASA AST Budget Estimates for 1998 also note that, with competition from foreign competitors greatly increasing, technology is "critically needed to help preserve the U.S. aeronautics industry market share, jobs and balance of trade".[3623]

7.1721 The AST Program was terminated in 1999 in order to focus resources on high priority national goals like aircraft engine emissions and airport crowding.[3624] The 2000 and 2001 Budget Estimates indicate that, under the AST Program, aggressive technology transition plans were pursued in order to mitigate the significant risk to successful technology transfer to industry as a result of early termination of the programme.[3625]

[3617] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1996, SAT 4-36.
[3618] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1997, SAT 4-36.
[3619] Power-by-Wire Development and Demonstration for Subsonic Civil Transport, Exhibit EC-366; NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1994, RD 9-36.
[3620] NASA AST Budget Estimates, FY 1992 – FY 2001, Exhibit EC-357, at FY 1995, SAT 4-29.
[3621] NASA Memorandum to Research and Focused Branch, at 4, Exhibit EC-365.
[3622] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1996, SAT-4-36.
[3623] NASA AST Budget Estimates, FY 1992 - FY 2001, Exhibit EC-357, at FY 1998, SAT 4.1-30.
[3624] NASA AST Budget Estimates, FY 1992 – FY 2001, at FY 2001, Exhibit EC-357.
[3625] NASA AST Budget Estimates, FY 1992 – FY 2001, Exhibit EC-357, at FY 2000, at FY 2001, SAT 4.1-36.

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Research & Technology Base Program

7.1722 As of 1996, funding for work on composite fuselage structures that had previously been allocated to the ACT Program continued under the "Materials and Structures" element of the R&T Base Program (subsequently to become the "Airframe Systems Program" when the R&T Base Program was reorganized in 1997).

7.1723 The element of the R&T Base Program relevant to the European Communities' arguments concerning the aerodynamics and structural design of the 787 is the "aerodynamics research and technology programme". This component of the R&T Base Program was formed in 1992.[3626] The R&T Base Program was reorganized in 1997, after which aerodynamics research was performed across more than one of the components of the programme.[3627]

7.1724 The element of the R&T Base Program relevant to the European Communities' arguments concerning the health management systems on the 787 was the "flight systems research and technology programme".

7.1725 The goal of NASA's R&T Base Program is described by NASA as follows:

> "{T}o serve as the vital foundation of expertise and facilities that consistently meets a wide range of aeronautical and technology challenges for the nation. The program is intended to provide a high-technology, diverse-discipline environment that enables the development of new, even revolutionary, aerospace concepts and methodologies for applications in industry."[3628]

7.1726 NASA's R&T Base Budget Estimates for 1997 contain the following statement as a strategy for achieving its goals:

> "Today, the U.S. leadership position in aeronautics is being seriously challenged by aggressive international competition. Future U.S. competitiveness is dependent upon sustained NASA advances in aeronautics. Critical elements of NASA's contribution to the aviation industry are the flow of new ideas and concepts, the ability to react quickly to unanticipated technical challenges, and the fundamental knowledge produced by the R&T Base."[3629]

7.1727 The objectives of the Materials and Structures element of the R&T Base Program included the development of structures and materials technologies for increasing efficiency, reducing the cost of the next generation of aircraft and increasing the competitiveness of the next generation of aircraft by making available advanced materials for primary airframe and engine structures.[3630] The objective of the Aerodynamics Research and Technology element of the R&T Base Program was to provide new, validated technology applicable to future U.S. military and civil aircraft from subsonic to hypersonic speeds.[3631]

[3626] NASA R&T Base Budget Estimates, FY 1991 – FY 2004, at FY 1992, Exhibit EC-398, RD 12-3.

[3627] See Dominik Wacht, an Analysis of Selected NASA Research Programs and Their Impact on boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 126, in which Wacht discusses the programme achievements by aeronautical discipline rather than by programme classification, due to the change in the structure of the programme.

[3628] NASA R&T Base Budget Estimates, FY 1991 – FY 2004, Exhibit EC-398, at FY 1999, SAT 4.1.2.

[3629] NASA R&T Base Budget Estimates, FY 1991 – FY 2004, Exhibit EC-398, at FY 1997, SAT 4-5. See also, NASA R&T Base Budget Estimates, FY 1991 – FY 2004, Exhibit EC-398, at FY 1998, SAT 4.1-3.

[3630] NASA R&T Base Budget Estimates, FY 1991 – FY 2004, Exhibit EC-398, at FY 1995, SAT 4.7.

[3631] NASA R&T Base Budget Estimates, FY 1991 – FY 2004, Exhibit EC-398, at FY 1995, SAT 4.5.

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High Speed Research Program

7.1728 NASA's HSR Program was a focused technology development programme intended to enable development of a high-speed (i.e. supersonic) civil transport ("HSCT").[3632] The programme proceeded in two phases, with Phase I commencing in 1990 and Phase II commencing in 1994.[3633] The object of Phase I was to define "HSCT environmental compatibility requirements in the areas of atmospheric effects and community noise and sonic boom, and…establish{ing} a technology foundation to meet these requirements".[3634] The objective of the HSR Program was expressed at the beginning of Phase I as follows :

> "Studies have indicated that, under certain economic conditions with sufficient technology development, future high-speed aircraft could be economically competitive with long-haul subsonic aircraft. Currently, however, critical environmental concerns about atmospheric impact, airport noise, and sonic boom present powerful disincentives to the private sector to pursue such research and technology. The high-speed research program will address the resolution of these barrier environmental issues and develop the basis for evaluating technology advances that can provide the necessary environmental compatibility."[3635]

7.1729 Phase II of the programme was directed at "addressing essential technologies needed by the U.S. aeronautics industry in order to make informed decisions regarding future HSCT development and production".[3636] At the beginning of Phase II, the goal of the HSR Program was expressed as:

> "Industry studies…have identified a substantial market for a future high-speed civil transport (HSCT) aircraft to meet the rapidly growing long-haul market…While current technology is insufficient, the studies further indicate that an environmentally compatible and economically competitive HSCT could reach fruition through aggressive technology development and application." [3637]

7.1730 Boeing and McDonnell Douglas were the primary airframe contractors under the HSR Program, with this area of research commencing in Phase II. Although Phase II of the HSR Program was originally planned as an eight year project, the programme was cancelled at the end of 1999. NASA explained this decision in its Budget Estimates:

> "In the early 1990's, studies indicated that an environmentally compatible and economically competitive HSCT could be possible through aggressive technology development. Since then, NASA concentrated its investments in the pre-competitive, high-risk technologies. While NASA has continued to be successful and is on track to meet the original program goals, recent market analyses and estimated industry development costs of $15 to $18 billion have made the HSCT considerably less attractive to NASA's industry partners. Cost of development in this amount puts the aircraft industry at significant financial risk. Current analyses indicate that further significant investments in technology development are required to ensure an economically viable HSCT. Consequently, the cost of development has led the major aircraft manufacturer to the conclusion that the introduction of an HSCT cannot

[3632] "US Supersonic Commercial Aircraft, Assessing NASAs High Speed Research Program", Exhibit EC-319, p. 1.
[3633] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 1994, RD 9-31, and RD 9-33.
[3634] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 1994, RD 9-31.
[3635] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 1991, RD 12-35.
[3636] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 1994, RD 9-33.
[3637] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 1994, RD 9-31.

> reasonably occur prior to the year 2020. For these reasons, industry has reduced their commitment to this area and has scaled back their investments. Given other pressing needs in the Agency in general, and aeronautics in particular, the HSR program will be concluded by the end of FY 1999." [3638]

Computational Aerosciences Project of the High Performance Computing and Communications Program

7.1731 The HPCC Program was designed as a multi-agency effort, with the involvement of all major agencies interested in high speed computing and communications, including NASA, the Department of Energy, the National Science Foundation, the Defense Advanced Research Projects Agency, the Department of Commerce, the National Institutes of Health and the Environmental Protection Agency.[3639] The 1992 Budget Estimates for the HPCC Program describe the goal of NASA's portion of the HPCC as:

> "{T}o accelerate the development and application of high-performance computing technologies to meet NASA's science and engineering requirements." [3640]

7.1732 Further, a HPCC fact sheet produced by NASA claims that the goal of the HPCC Program was to:

> "{F}oster the development of high-risk, high-payoff systems and applications that will most benefit America…to increase the speed of change in research areas that support NASA's aeronautics, Earth and space missions." [3641]

7.1733 The HPCC Program consisted of four components, one of which was the computational aerosciences project ("CAS"), the component most relevant to the aeronautics industry.[3642] The aim of the CAS project has been described variously as "to significantly shorten the design cycle time for advanced aerospace products such as future high-speed civil transports"[3643] and to "accelerate the development, availability and use of high-performance computing technology by the U.S. aerospace industry, and to hasten the emergence of a viable commercial market for hardware and software vendors to exploit this lead".[3644] Further, according to the HPCC Budget estimates:

> "CAS targets advances in aeroscience algorithms and applications, system software and machinery that will enable more than 1000-fold increases in system performance early in the twenty-first century. These computational capabilities will be sufficiently characterized such that they can be rapidly integrated into economical design and

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[3638] NASA HSR Budget Estimates, FY 1991 – FY 2001, Exhibit EC-343, at FY 2000, SAT 4.1-29.

[3639] NASA HPCC Budget Estimates, FY 1992 – FY 2003, Exhibit EC-373, at FY 1992, Budget RD 2-12.

[3640] NASA HPCC Budget Estimates, FY 1992 – FY 2003, Exhibit EC-373, at FY 1992, Budget RD 2-12.

[3641] The National Aeroautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372, at p. 1.

[3642] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, at page 122. The other components of HPCC were the Earth and Space Sciences project, the Information Infrastructure and Technology and Applications component, and the Remote Exploration and Experimentation project; The National Aeroautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372.

[3643] NASA HPCC Budget Estimates, FY 1992 – FY 2003, Exhibit EC-373, at FY 1996, SAT 4-18.

[3644] The National Aeroautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372, p. 3.

> development processes for use by the U.S. industry. Although CAS does not develop production computing systems, CAS technology and the characterization of existing hardware and software will enable the development of full-scale systems by industry and will make commercial ventures into this area more attractive." [3645]

7.1734 The HPCC fact sheet provides:

> "The U.S. aerospace industry can effectively respond to increased international competition only by producing across-the-board better quality products at affordable prices. High performance computing capability is a key to the creation of a competitive advantage, by reducing product cost and design cycle times; its introduction into the design process is, however, a risk to a commercial company that NASA can help mitigate by performing this research. The CAS project catalyzes these developments in aerospace computing, while at the same time pointing out the future way to aerospace markets for domestic computer manufacturers." [3646]

Quiet Aircraft Technology and Vehicle Systems Programs

7.1735 The QAT Program built upon the noise reduction element of the AST Program.[3647] QAT, along with its predecessor noise reduction element of the AST Program, focused on "developing noise reduction technology for the US commercial aircraft industry to enhance its competitiveness to meet national and international environmental requirements and to facilitate market growth".[3648]

7.1736 Beginning in 2003, NASA classified the QAT Program as a component of the Vehicle Systems Program. The VSP Program is focused on the development of breakthrough technologies for future aircraft and air vehicles. One of the stated justifications for the VSP Program is as follows:

> "U.S. competitors are targeting aviation leadership as a stated strategic goal. Without careful planning and investment in new technologies, near-term gridlock, constrained mobility, unrealized economic growth, and the continued erosion of U.S. aviation leadership could result."[3649]

Aviation Safety Program

7.1737 The Aviation Safety Program commenced in 2000 with the goal of developing and demonstrating technologies that contribute to a reduction in aviation and accident fatality rates by a factor of five by the year 2007, compared with the 1994 – 1996 average.[3650] Under the Aviation Safety Program, NASA conducts high-payoff research that builds upon and advances the agency's safety-related research capabilities. In particular, the research conducted under this programme

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[3645] NASA HPCC Budget Estimates, FY 1992 – FY 2003, Exhibit EC-373, at FY 2000, SAT 4.1-24.

[3646] The National Aeroautics and Space Administration's (NASA) High Performance Computing and Communications (HPCC) Program, Exhibit EC-372, at p. 3.

[3647] NASA QAT Budget Estimates, FY 2001-FY 2007, Exhibit EC-384, at FY 2002, SAT 4.1-75. Beginning with its FY 2003 Budget Estimates, NASA considered the QAT Program to be a component of the Vehicle Systems Program; however, it provided a separate line item for the QAT Program through its FY 2005 Budget Estimates. The European Communities considers the QAT Program as a separate programme through FY 2005, and excludes figures for the QAT Program accordingly in its analysis of the non-engine LCA components of the Vehicle Systems Program.

[3648] NASA Memorandum to Research and Focused Branch, Exhibit EC-365, at 4.

[3649] NASA Vehicle Systems Budget Estimates, FY 2003 – FY 2007, Exhibit EC-396, at FY 2003, SAT 4-23.

[3650] NASA Aviation Safety Budget Estimates, FY 2000 – FY 2007, Exhibit EC-382, at FY 2000, SAT 4.1-49.

encompasses (i) foundational science and discipline-centric research; (ii) multidisciplinary, coupled effects, and component-based research; (iii) sub-system or multidisciplinary integration; and (iv) system level design.[3651]

Industrial Preparedness/Manufacturing Technology Program

7.1738 The DOD ManTech Program is a corporate Air Force programme that establishes and demonstrates advances in manufacturing process technologies, manufacturing engineering systems and industrial practices, and transitions these advancements into weapons systems design, development, acquisition and/or sustainment.[3652] The Air Force ManTech major programme tenets are described as: "improvement of manufacturing processes and technologies; collaboration with Government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing, multiple system/customer applications; potential for significant return on investment; and customer commitment to implement."[3653] The ManTech Program provides cost reduction processes and practices and new manufacturing capabilities applicable to existing as well as new weapon systems under development. The ManTech Program "strives to make superior mission enabling technologies an affordable life cycle reality by expanding access to a capable, responsible, multi-use industrial base with efficiencies comparable to world class enterprises." [3654]

Dual-Use Science and Technology Program

7.1739 DOD Budgets for the DUS&T Program described the programme in the following way:

> "This program allows the Air Force to leverage industry investments in advanced technologies that are mutually advantageous to both the Air Force and industry. One of the program's objectives is to establish a tool for the Air Force to stimulate the development of dual-use technologies that will provide greater access to commercial technologies, and will result in affordable defense systems that maintain battlefield superiority. A key component of the program is the cost sharing requirement from both industry and the Air Force, which affirms commitment to the development effort. Specific projects are determined through annual competitive solicitation(s). A second objective is to use FY 1997 Defense Authorization Act Section 804, Other Transactions Authority, as part of the Dual Use S&T program to educate the Air Force S&T workforce in non-traditional or commercial contracting practices. Technology development areas considered include advanced materials and manufacturing, affordable sensors, advanced propulsion, power and fuel efficiency, information and communications systems, and weapons systems sustainment." [3655]

7.1740 In the light of the weight of the evidence linking the NASA R&D programmes to competitive advantages for the U.S. aeronautics industry, coupled with the amounts involved and period of time over which the assistance was provided, it is very difficult for the Panel to envisage how the aeronautics R&D subsidies to Boeing could *not* have had a meaningful effect on its competitive position in relation to Airbus. The Panel does not consider that it is very realistic to believe that the

[3651] NASA Aviation Safety Budget Estimates, FY 2000 – FY 2007, Exhibit EC-382, at FY 2007, SAE ARMD 2-7.
[3652] Air Force Industrial Preparedness/Manufacturing Technology Budgets for FY 1993, Exhibit EC-431.
[3653] Air Force Industrial Preparedness/Manufacturing Technology Budgets for FY 1993, Exhibit EC-431.
[3654] Air Force Industrial Preparedness/Manufacturing Technology Budgets for FY 1993, FY 1996-FY 2007 (PE# 0708011F for FY 1993, FY 1997-FY 2007; PE# 0603771F for FY 1996), Exhibit EC-431.
[3655] Dual Use Science & Technology Budgets for FY 2000-FY 2007 (PE# 0602805F), Exhibit EC-424.

United States Government would have provided aeronautics R&D subsidies of the magnitude received by Boeing (and McDonnell Douglas) between 1989 and 2006 without those subsidies contributing in a genuine and substantial way to improving Boeing's competitiveness. The objectives of DOD's ManTech and DUS&T programmes are not specifically expressed as being to provide a competitive advantage to the U.S. aeronautics industry. Rather, these programmes have the explicit objective of developing "dual-use" R&D. To that end, they envisage collaboration with industry in developing technologies, including cost reduction processes and practices that have application in the civil sector. In our view, the objectives of these DOD RDT&E programmes suggest that subsidies funded under those programmes contribute to providing Boeing with competitive advantages. Nevertheless, the Panel's conclusion that the aeronautics R&D subsidies have had "technology effects" in relation to the 787 does not rest solely, or even primarily, on the general considerations set out in the preceding paragraphs regarding the structure and design of the R&D programmes at issue. The Panel has also undertaken a detailed examination of the actual operation of the aeronautics R&D subsidies.

Operation of the aeronautics R&D subsidies

7.1741 As we have already concluded in the context of our analysis of whether the aeronautics R&D subsidies at issue constitute purchases of services, the evidence relating to NASA aeronautics R&D indicates that the work that Boeing performed under its aeronautics R&D contracts and agreements with NASA was principally for its own benefit or use, rather than for the benefit or use of the United States Government (or unrelated third parties).[3656] The aeronautics R&D conducted under the ManTech and DUS&T programmes was funded through cooperative agreements or other cost-shared arrangements and was directed to the development of "dual use" R&D.[3657]

7.1742 We do not consider that the NASA R&D subsidies were directed to general aeronautics research or to research of incidental importance to the development of a product. Had it been so directed, it may be reasonable to doubt whether the subsidies could be considered to have made an integral and enduring contribution to the development of a product. On the contrary, the NASA R&D subsidies the subject of our analysis are precisely focused on those areas which, from a commercial perspective, are considered to be the most crucial to the LCA industry, in the sense that they carry the greatest prospect of creating significant competitive advantage. These are technologies that promise airline customers lower direct operating costs and those that reduce the time to market.

7.1743 As McDonnell Douglas engineers explained to participants at a NASA/DOD Advanced Composites Technology Conference, "the measure of merit for our technology is DOC {direct operating cost}... It is apparent that a technology which could reduce the cost of the total aircraft and also reduce the weight would have a marked advantage over a technology that saved weight but increased cost by the same percentage."[3658] In the context of Boeing's work under the ACT Program, a Boeing engineer explained, "{t}he biggest thing we need to do is to reduce manufacturing costs. Now we have NASA adhering to the idea that they need to help us with these costs, and not just with the technology itself."[3659] This engineer described the focus of Boeing's work under the ACT Program in the following manner:

> "The main thing we're after is manufacturing productivity and cutting costs, as well as design concepts that produce advantages from a maintenance stand-point. They

[3656] See para. 7.981 of this Report.
[3657] See para. 7.1148 of this Report.
[3658] Mark J. Shuart, Sixth NASA/DOD Advanced Composites Technology Conference, NASA Conference Publication 3294, Vol. I, Part 1, June 1996, Exhibit EC-279, p. 7.
[3659] Guy Norris, "Boeing homes in on carbon-composite production costs," Flight International, 6 September 1995, Exhibit EC-335, quoting Boeing's director of aircraft-structures engineering, Jack McGuire.

> should also be lightweight, have increased fatigue resistance and better resistance to corrosion .... This is the only way of getting the use of graphite {carbonfibre composite} to be competitive, and has the potential to give operators a drop in direct operating costs of around 9%."[3660]

7.1744 In addition to focussing on technologies that offer lower costs, both to the airframe manufacturer as well as airlines, the research funded under the NASA R&D programmes was also directed towards technologies that reduce the time to market, for example, by reducing development and production cycles. In describing the goals of the IWD project element of the AST Program, NASA said:

> "Currently, the U.S. commercial transport aircraft manufacturing industry is focused on reduced costs and improved time to market through reduced product development cycle time. In cooperation with U.S. industry, NASA is developing efficient, integrated design and test procedures focused on streamlined aerodynamic design cycle times reduced by 50%. This will provide an overall reduction in the total aircraft development time of one year compared to an established 1995 baseline product development cycle time."[3661]

7.1745 In short, the aeronautics R&D subsidies are focused on particular types of technologies; namely, those that industry considers to be of the greatest potential commercial benefit. Indeed, the focus of the research under the aeronautics R&D programmes on areas of primary strategic importance to the U.S. civil aircraft industry is hardly surprising given that the definition of the scope and programme of research was arrived at in collaboration with industry. For example, NASA reported that during a series of meetings with aviation industry CEOs in late 1996, it was agreed that the dramatic reduction of airplane acquisition cost was a high-priority need. In order to address this need, NASA refocused the IWD, Propulsion and Composite Wing elements of the AST Program "to satisfy the early milestones of a more revolutionary technology to satisfy this goal."[3662]

7.1746 The aeronautics R&D subsidies not only operated as collaborative research projects with and for Boeing, but also complemented Boeing's internal product development efforts. This complementarity between the research that Boeing performed pursuant to the aeronautics R&D subsidies and its own internal R&D efforts is apparent from the length of the research and development cycle in the LCA industry and the timing of Boeing's product development, as well as from the extensive breadth and depth of technologies that are required to produce a superior aircraft and Boeing's collaboration with NASA in specifying and planning the research tasks that it would undertake for NASA and the technical performance goals of the particular R&D subsidies. For example, in a 1992 Boeing conference paper discussing the critical path to development of a composite fuselage that was originally envisaged under the ATCAS element of the ACT Program, the author states that the combined results of the three phases of the ACT Program (originally planned to run from 1989 to 2002), "if combined with Boeing internally funded efforts (e.g. other fuselage section, material and process standards, design manuals, and structural allowables), would prepare Boeing for commitment to a composite fuselage application" by 2002 – 2003.[3663] Indeed, the research that Boeing conducted for NASA on the technologies in question mostly occurred between 1989 and early 2000. Boeing was working on developing a predominantly composite, high-speed aircraft (the

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[3660] Guy Norris, "Boeing homes in on carbon-composite production costs," Flight International, 6 September 1995, Exhibit EC-335, quoting Boeing's director of aircraft-structures engineering, Jack McGuire.

[3661] NASA AST Budget Estimates, FY 1992 – FY 2001, Exhibit EC-357, at FY 1997, SAT 4-36.

[3662] NASA AST Budget Estimates, FY 1992 – FY 2001, Exhibit EC-357, at FY 1998, SAT 4.1-30. See also, FY 1999, SAT 4.1-36.

[3663] See Larry B. Ilcewicz, "Advanced Composite Fuselage Technology" Third NASA Advanced Composites Technology Conference, NASA CP-3178 Vol 1, 1992, Exhibit EC-1338, at 110.

Sonic Cruiser) before it shifted its focus in 2000 - 2001 to development of the 7E7/787.[3664] Boeing nevertheless acknowledges that it adapted the technologies being considered for the Sonic Cruiser for the 7E7/787.[3665]

7.1747 Another important aspect of the operation of the aeronautics R&D subsidies is their role in reducing Boeing's R&D risk. According to NASA, there are large disincentives for private sector investment in long-term, high risk aeronautical R&T. NASA considers that these disincentives stem from the inability of individual companies to fully capture the benefits of these research efforts, as well as the length of the aircraft research and development cycle and investment recoupment period, and the extensive breadth and depth of technologies required to produce a superior aircraft.[3666] As explained in a NASA publication:

> "As aeronautical technology became more complex and expensive, it was also more difficult for individual companies to shoulder the entire financial burden for researching and developing new technology and products by themselves ... For a manufacturer to be willing to invest the money into a new technology, it had to have short-term, concrete payoffs. Industry did not have the capability or incentive to pursue long term or high-risk projects, or research areas with uncertain benefits."[3667]

7.1748 The research conducted under the NASA R&D subsidies occurs through a gradual, iterative process in which failures and abandonment of further development of particular technologies serve as building blocks for newer technologies. In other words, even unsuccessful research generates important knowledge and experience that is applied to subsequent technology developments. This process leads to a gradual reduction of risk as, through a process of trial and error, development efforts are progressively focused on the most promising technologies. NASA introduced a system to categorize technologies according to their level of maturity ("technology readiness level" or TRL), ranging from the highest risk, lowest maturity technology (TRL 1), to the lowest risk, highest maturity technology (TRL 9). NASA's research efforts focus on the development of higher risk technologies up to TRL 6 (prototype demonstration). A 1999 NASA study of the average time taken for technologies to mature from initial concept to marketable product based on NASA's defined TRLs found that, with respect to the airframe technologies selected as part of the study, the average time from TRL 1 to TRL 6 was 11.3 years (with a standard deviation of 3.9), while the average time from TRL 1 to TRL 9 was 16.5 years (with a standard deviation of 4.2). [3668] While we do not mean to suggest that it would have taken Boeing as much as 11 years longer to develop the 787 in the absence of the aeronautics R&D subsidies, there is clearly evidence that the development of higher risk technologies up to TRL 6 results in an acceleration of the overall technology development process for

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[3664] United States' second written submission, para. 922; comments on the European Communities' response to question 87, para. 320; Boeing 2002 Annual Report, p. 18, Exhibit US-1230.

[3665] Bair Affidavit, Exhibit US-7, para. 10; see also, Boeing 2002 Annual Report, p. 18, Exhibit US-1230.

[3666] NASA R&T Base Budget Estimates, at FY 1997, SAT4.5; at FY 1999, SAT 4.1.3, Exhibit EC-398.

[3667] Airborne Trailblazer, Exhibit EC-288, p. 2.

[3668] Deborah J. Peisen et al., Case Studies: Time Required to Mature Aeronautic Technologies to Operational Readiness, SAIC and GRA, Inc., November 1999, Exhibit EC-795, at p. 11. The study was based on 18 civil aeronautics products from the major aeronautic technology divisions of airframes, propulsion, flight systems and ground systems. The study found that there is considerable variability in the time it takes for technologies to mature, with average maturation times varying by technology type, by the technology's primary benefit or goal, and to a lesser extent, by the need for additional technologies or NASA testing for the successful maturation of the technology. The average for the flight systems technologies selected as part of the study was 21.6 years (with a standard deviation of 15.3) to progress from TRL 1 to TRL 9, and 8.3 years (standard deviation 6.9) from TRL 1 to TRL6.

an airframe manufacturer like Boeing and would therefore facilitate an earlier product launch than would otherwise have been possible.[3669]

7.1749 The Panel's analysis of the operation of the R&D subsidies has also included a careful review of evidence presented by the parties concerning the technology concepts that Boeing and McDonnell Douglas studied pursuant to the NASA R&D subsidies, on the one hand, and the technologies that are being applied to the 787, on the other. The United States has sought to emphasize the differences between the two.[3670] The European Communities emphasizes the continuities. Appendix VII.F.1 to this Report sets forth a description of the particular technology areas and the parties' arguments pertaining to the technologies developed under the aeronautics R&D programmes and those applied to the 787.

7.1750 The Panel is aware that it is required to undertake an objective assessment of the matter, based on the arguments and evidence presented. In reviewing the parties' arguments and weighing the evidence, the Panel has come to the general conclusion that to focus on the differences between various technologies which may exist at particular points in time would artifically and inaccurately obscure the important links that exist between them. One such link is the fact that the evidence before us is consistent with the technologies properly being viewed essentially as efforts directed to solving enduring technological problems; for example, how to construct a composite barrel fuselage and composite wing in a way that not only reduces the weight of the aircraft but also its total cost. Another is that the evidence before us is consistent with a pattern whereby the technology concepts studied under the NASA R&D subsidies and the technologies applied to the 787 are essentially part of the same process in which solutions to technological problems are developed (through a collective exercise of progressive learning through trial and error involving largely the same teams of people over an extended period of time). Viewed from this perspective, we have concluded that technologies that may, at any given moment, be portrayed as discrete and unrelated, are in fact more appropriately regarded as being part of a single process of iterative learning and advancement in pursuit of a common technological goal.

7.1751 For example, the United States argues that the research that Boeing performed under the ATCAS contract did not relate to a single barrel fuselage, but instead to four quadrant, panelized fuselage sections.[3671] The European Communities acknowledges that under ATCAS Boeing designed, built and tested fuselage from four separate panel sections (rather than 360º barrel sections), but contends that the research under ATCAS served as a "roadmap" for Boeing to arrive at the composite fuselage barrel solution that it later applied on the 787.[3672] According to the European Communities, "on the long road to Boeing's successful development of a composite fuselage barrel, ATCAS provided Boeing with quintessential foundational knowledge and technologies, by supporting the

[3669] Indeed, we recall that the initial goal of NASA's AST Program was to *accelerate the development of key, high-payoff technologies* to maintain the performance/cost advantage of U.S. subsonic transport aircraft in the world market, and to ensure their efficient and safe operation in the National Airspace System; NASA AST Budget Estimates, FY 1992 – FY 2001, Exhibit EC-357, at FY 1993, RD12-27. Emphasis added.

[3670] Affidavit of Alan Miller, Exhibit US-1258, Affidavit of Michael Bair, Exhibit US-7. The United States refers to statements by various Boeing engineers as "affidavits". The Panel's use of the titles assigned to these statements by the United States does not imply that the Panel considers these statements to be affidavits.

[3671] United States' comments on European Communities' response to question 87, para. 21. Specifically, the United States explains that the ATCAS crown panel was built as a standalone section using outer mould line (OML) tools and inner mould line (IML) cauls to co-cure the skin and stringers, while the 787 fuselage, by contrast, is being built as a single solid piece of composite created and cured around enormous multi-section mandrels which are IML tools (designed by suppliers for Boeing) with OML cauls.

[3672] European Communities' confidential oral statement at the second meeting with the Panel, para. 44.

achievement of significant milestones in this long-term, step-by-step process."[3673] As the European Communities notes, under ATCAS, Boeing did undertake preliminary costing studies to substantiate the advantages of 360° barrel fuselage sections.[3674] Moreover, the planning timeline originally devised for Boeing's work under the ATCAS contract shows that research into the separate panels was envisaged to precede and ultimately lead to testing of a full barrel fuselage.[3675] The importance of the work on the separate panel sections to the development of a 360° barrel section is also evident from a NASA contractor report which observed that the advantages of a 360° barrel could be developed *only after* the complexities of the separate panel sections were better understood.[3676]

7.1752 To take an example from the "more-electric systems" technology area, the European Communities asserts that in **[***]**, the 787 will use electro-mechanical actuators akin to those that McDonnell Douglas studied and developed pursuant to its PBW contract, which was funded through the power-by-wire/fly-by-light subtask of NASA's AST Program.[3677] The United States argues that the flight controls developed by Boeing for the 787 are not the same as the electronic actuation technology that was originally developed under the power-by-wire/fly-by-light subtask of NASA's AST Program, and that the subtask was terminated before any new technology related to advanced power management and distribution systems was built and tested.[3678] The European Communities argues that this subtask of the AST Program enabled McDonnell Douglas to gain knowledge and experience with regard to power system definitions and requirements by designing, fabricating, testing and demonstrating power management and distribution architectures, electrical actuators and starter/generators.[3679] According to the European Communities, all of this knowledge and experience contributed to Boeing's design and development of the more-electric architecture of the 787, particularly its ability to integrate more-electric components into the aircraft. The NASA PBW contract with McDonnell Douglas noted that three prior studies had shown operational, weight and cost advantages for commercial subsonic transport aircraft using all-electric/more-electric technologies in secondary electric power systems.[3680] This is despite the fact that the studies were completed on different aircraft, using different criteria and applying a variety of technologies. The objective of the PBW contract with McDonnell Douglas was expressed as being the development and demonstration of technology for a more-electric secondary power system that would provide enough confidence through testing that industry would begin to transfer the technology to their civil fleet.[3681] In these circumstances, we consider it artificial to suggest that the research into more-electric systems architecture that Boeing and McDonnell Douglas conducted under the aeronautics R&D programmes did not contribute in a genuine and substantial way to Boeing's development of more-electric systems

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[3673] European Communities' confidential oral statement at the second meeting with the Panel, para. 44. See also, Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 72-76.

[3674] European Communities' confidential oral statement at the second meeting with the Panel; European Communities' first written submission, Annex C, para. 47.

[3675] Larry B. Ilcewicz, "Advanced Composite Fuselage Technology," Third NASA Advanced Composites Technology Conference, NASA CP-3178 Vol 1, 1992, at 110, Exhibit EC-1338; see also, Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 70.

[3676] Larry B. Ilcewicz et al., Advanced Technology Composite Fuselage – Program Overview, NASA Contractor Report 4734, April 1997, p. 6-6.

[3677] European Communities' first written submission, Annex C, para. 71. NASA Contract NAS3-27018 with McDonnell Douglas Aerospace regarding Power-By-Wire Development and Demonstration for Subsonic Civil Transport, 29 September 1993, Exhibit EC-826, at C-5.

[3678] Bair Affidavit, Exhibit US-7, para. 62.

[3679] European Communities' first written submission, Annex C, para. 71.

[3680] NASA Contract NAS3-27018 with McDonnell Douglas Aerospace regarding Power-By-Wire Development and Demonstration for Subsonic Civil Transport, 29 September 1993, Exhibit EC-826, at C-2.

[3681] NASA Contract NAS3-27018 with McDonnell Douglas Aerospace regarding Power-By-Wire Development and Demonstration for Subsonic Civil Transport, 29 September 1993, Exhibit EC-826, at C-2.

for the 787 because, for example, the flight controls for the 787 are not the same electronic actuation technology studied by McDonnell Douglas under the PBW contract.

7.1753 In the Panel's view, it is reasonable to expect that it is necessary to conduct research into many different potential technologies as part of the process of identifying and developing the most promising technologies for commercial application. The fact that much of the research is unsuccessful, or surpassed, or that the precise technology concepts studied under an industry-focused R&D programme at one particular point in the technology development process may not be the same as the technologies that are ultimately applied to a product does not, in our view, necessarily detract from the contribution of that research to the development of a product.

7.1754 We note the statement of a Boeing engineer submitted by the United States expressing the opinion that the research performed by Boeing under the ATCAS contract did not provide any experience or data relevant to the 787 design.[3682] According to this engineer, in designing the 787, Boeing used research and production experience and data from its other commercial airline programmes, particularly the 777, and also invented many new technologies and processes "from scratch" during the course of 787 development. We consider this view to be somewhat exaggerated in the light of other evidence before the Panel concerning the objectives of the R&D subsidies, the length of time over which they operated, the collaboration with Boeing and complementarity with Boeing's own internal R&D efforts and the nature of the technological problems that were the focus of the research. In short, the evidence presented by the United States, assessed along with all of the evidence concerning the nature of the aeronautics R&D subsidies, does not persuade us that the differences between the technology concepts studied under the R&D subsidies and the technologies applied to the 787 are such that it is no longer possible to consider the R&D subsidies as having contributed in a genuine and substantial way to Boeing's development of technologies for the 787.

7.1755 We now address the other main arguments advanced by the United States contesting the importance of the aeronautics R&D subsidies to Boeing's ability to develop and launch the 787 as and when it did.

7.1756 First, the United States argues that the 787 is a product of Boeing's past commercial experience and its significant internal R&D efforts.[3683] However, as should be clear from the Panel's discussion of the operation of the aeronautics R&D subsidies, we consider that this perspective as to the technological origins of the 787 seeks to sever artificially the contribution of earlier significant research efforts which are nevertheless an inherent part of the technology development process. The Panel considers that its assessment of the effects of the aeronautics R&D subsidies on Boeing's development of technologies for its aircraft should be made on the basis of the cumulative effect of Boeing's decades-long participation in NASA and DOD programmes[3684], taking into account factors such as the specific technical objectives of the R&D programmes and the complementarity and interdependence between the work that Boeing and McDonnell Douglas performed for NASA and Boeing's own internal R&D efforts.

[3682] Affidavit of Alan Miller, Exhibit US-1258, para. 21.

[3683] Affidavit of Alan Miller, Exhibit US-1258, para. 4, 21; Bair Affidavit, Exhibit US-7, paras. 7, 75; Affidavit of Branko Sarh, Exhibit US-1254, para. 15.

[3684] The Panel agrees with the European Communities that the real value of the aeronautics R&D subsidies was in having dozens of Boeing engineers immersed in composite design and manufacturing for several years, thus enabling Boeing to leverage the substantial accumulated knowledge and experience in any future composite-related R&D activity; Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), para. 27; Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 67 (stating that the "most important benefit that the ACT program provided to Boeing was the ability for its engineers to gain experience and work under real development program restrictions with clear cost targets".)

7.1757 The Panel is not, of course, of the view that the technologies applied to the 787 are entirely and exclusively attributable to work that Boeing and McDonnell Douglas conducted for NASA and DOD pursuant to the aeronautics R&D subsidies. The Panel is well aware that, from 2000 onwards, Boeing and its suppliers have made significant investments in R&D in the respective technology areas, first in the context of the development of the Sonic Cruiser, and subsequently, the 7E7/787. Moreover, as regards the technologies on the 787 in particular, the Panel notes that, prior to performing the research under the aeronautics R&D contracts at issue in this dispute, Boeing had already developed expertise in the application of composites in secondary structures, as well as in primary structures such as the 777 empennage. It is also clear that during the 1990s, Boeing suppliers on the 787, such as Kawasaki Heavy Industries and Fuji Heavy Industries were developing expertise in the use of composites in primary aircraft structures contemporaneously with Boeing's development efforts.[3685] The Panel acknowledges that Boeing had also derived valuable knowledge and experience from lessons learned over the course of the 777 and 737NG production programmes.

7.1758 Boeing's technology developments are clearly the product of a variety of factors. Indeed, it is reasonable to assume that at some point in time, the contribution of the NASA-funded research will diminish in relation to other, more recent or revolutionary technological developments that are attributable to other factors, and that it will no longer be possible to characterize the NASA research conducted in the 1990s as having contributed in a genuine and substantial way to new technologies applied to future Boeing LCA. The United States considers that this point had already been reached by 2004. For the reasons that we have set forth above, we do not agree.

7.1759 Second, the United States argues that, to the extent that Boeing considered that any of the research that it performed under the NASA and DOD R&D contracts and agreements was of independent value to its commercial aircraft development, Boeing had the financial capability and ability to conduct that R&D in the absence of any NASA and DOD funding.[3686] Therefore, according to the United States, in the absence of any subsidies, Boeing could and would have funded any R&D necessary for the 787.[3687] As we explain in paragraphs 7.1830-7.1831, we are not persuaded that the European Communities has demonstrated that Boeing inherently lacked the financial means to price and develop its LCA in the manner in which it did. What does, however, appear clear to the Panel is that NASA's role in aeronautical research has been explained precisely on the basis of, among other things, the large disincentives for private sector investment in long term, high risk aeronautical R&D (stemming from the inability of individual firms to fully capture the benefits from the research efforts).[3688] We have no reason to doubt this evidence. That must at the very minimum mean that, as applied in this particular instance, even if Boeing could have eventually achieved through its own resources the gains that in fact accrued to it through NASA's assistance (a matter on which we express no view), it is not reasonable to believe that Boeing could have done so within the time frame, and/or at the lower cost to itself that were the product of the aeronautics R&D subsidies.

[3685] For example, by the mid-1990s, Kawasaki Heavy Industries had designed and built an all composite wing for the Japanese FS-X fighter aircraft. The Japan Aircraft Development Corporation is reported as having contributed 21 per cent to the Boeing 777 project for the design and production of the fuselage, centre wing and wing body fairings for the life of the 777 programme; Richard N. Hadcock, A Chronology of Advanced Composite Applications, in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, pp. 35, 49, Exhibit EC-792. Kawasaki Heavy Industries, Mitsubishi Heavy Industries and Fuji Heavy Industries, operating through the Japan Aircraft Development Corporation, are also reported to be building and co-designing approximately 35 per cent of the 787, Dominic Gates, "Boeing Shares Work, but Guards its Secrets", Seattle Times, 15 May 2007, Exhibit EC-1167.

[3686] United States' comments on the European Communities' response to question 187, para. 324.

[3687] United States' comments on the European Communities' response to question 187, para. 324.

[3688] NASA R&T Base Budget Estimates, at FY 1997, SAT 4.5; at FY 1999 SAT 4.1.3, Exhibit EC-398.

BCI deleted, as indicated **[***]**

7.1760 The aeronautics R&D subsidies in question amount to at least $2.6 billion[3689], a considerable amount of money from the perspective of a government agency. The Panel is aware, however, that this amount perhaps may not appear significant when compared to Boeing's consolidated revenues or R&D expenditures over 1989 - 2006. Indeed, as the United States points out, Boeing repurchased over $16 billion in stock between 1986 and 2006.[3690] However, this sort of numerical comparison presupposes that the effects of the aeronautics R&D subsidies can essentially be reduced to their cash value, a proposition that we do not accept. As can be seen from the analysis above, the value to Boeing of the particular aeronautics R&D programmes in question is essentially a function of the technological advancements that those programmes provide. Precisely because the nature of this kind of subsidy is that it is intended to multiply the benefit from a given expenditure, the Panel considers it unlikely that the effects of such expenditure (to the extent that it was successfully deployed) would be reducible to its face amount. The United States' invitation to compare the amounts of the aeronautics R&D subsidies with Boeing's payments to shareholders may be taken also to imply that the ultimate effect of the aeronautics R&D subsidies was merely to increase payments to Boeing's shareholders. The Panel does not accept the proposition that the effect of the aeronautics R&D subsidies was essentially to benefit Boeing's shareholders by replacing funds that Boeing would otherwise have spent on R&D. As we have noted above in paragraph 7.1759, we have no reason to doubt the evidence that there are large disincentives for private sector investment in research of the kind that was conducted under the aeronautics R&D subsidies, and any suggestion that a firm such as Boeing would have conducted such research is subject to the same fundamental objection here. Moreover, we consider that it is implausible that such specifically earmarked and scrutinized R&D funds disbursed over such a period of time were effectively nothing more than a transfer to shareholders.

7.1761 Finally, as regards the United States' general arguments concerning the DOD subsidies, the Panel is not persuaded that technologies developed under the DOD R&D programmes are neither "technologically applicable" to commercial aircraft (because of the different missions and cost-sensitivities of military and commercial aircraft), nor "legally applicable" to commercial aircraft (because of Boeing's decision to ensure that the 787 is "ITAR free".)[3691]

7.1762 With respect to the first of these arguments, we have already concluded, in the context of our analysis of whether DOD aeronautics R&D measures constitute a subsidy within the meaning of Article 1 of the SCM Agreement, that the United States has failed to substantiate its assertion that only a minor amount of the R&D conducted by Boeing under the DOD R&D programmes at issue was "technologically applicable" to commercial aircraft. Among other things, the United States' argument that DOD-funded research on military aircraft is designed to fulfil military functions, and does not translate well to the different commercial imperatives of commercial aircraft production (in terms of FAA certification/maintenance requirements and efficiency of production) overlooks the fact that at least some of the DOD programmes, for example, the ManTech Composites Affordability Initiative related to Advanced Fibre Placement, had the explicit objective of funding R&D to be applied towards both military and civil aircraft and emphasized the development of lower cost technologies.

7.1763 With respect to the second of these arguments, we have already concluded, in the context of our analysis of whether DOD aeronautics R&D measures constitute a subsidy within the meaning of Article 1 of the SCM Agreement, that the United States has failed to substantiate its assertion that the ITAR make it effectively impossible for Boeing to utilize any of the R&D performed under DOD R&D contracts and agreements towards LCA. Among other things, while we accept the United States' assertions that the ITAR restrict Boeing's ability to use certain R&D performed for DOD towards its civil aircraft, and while we accept that Boeing complies with ITAR in general and took

[3689] See para. 7.1433 of this Report.
[3690] United States' comments on the European Communities' response to question 78, para. 270.
[3691] Bair Affidavit, Exhibit US-7, para. 25.

steps to ensure that the 787 is "ITAR free", and while we further accept that the situation with respect to the scope and coverage of the ITAR is not entirely clear, the United States has failed to explain how its assertions regarding the ITAR can be reconciled with the fact that some of the R&D funded by DOD – including R&D performed by Boeing under assistance instruments entered into under the ManTech and DUS&T programmes, which were subject to the ITAR – had the *explicit objective* of being applied towards civil aircraft.

7.1764 For the reasons set forth above, we would characterize the NASA R&D subsidies as strategically-focused R&D programmes with a significant and pervasive commercial dimension, undertaken in collaboration with U.S. industry to provide competitive advantages to U.S. industry by funding research into high risk, high pay-off research of the sort that individual companies are unlikely to fund on their own. The DOD R&D subsidies funded through the ManTech and DUS&T programmes under DOD's RDT&E Program are focused on pursuing "dual use" technologies through collaborative efforts with U.S. industry. The aeronautics R&D subsidies are designed to develop and validate new technologies for Boeing to commercialize, and we consider that it would be artificial to treat their contribution as having been exhausted or so diminished as to no longer be making a genuine and substantial contribution to Boeing's development of technologies for the 787.

The conditions of competition

7.1765 A further factor that we consider to be relevant to our evaluation of whether the aeronautics R&D subsidies have caused serious prejudice to the interests of the European Communities by reason of their "technology effects" concerns the particular conditions of competition in the LCA industry. As explained by the United States' economic consultants, NERA Consulting, the real competition between Airbus and Boeing occurs through their respective investments in R&D to build better airplanes:

> "The essence of the intense competition between Boeing and Airbus is to design and build better airplanes – improved versions of existing models as well as new models."[3692]

7.1766 In a 2005 Airbus document, Airbus explains that the only way that it was able to penetrate a market that was largely dominated by U.S. manufacturers was to "offer a unique value with its products through innovation":[3693]

> "Airbus has evolved into a formidable competitor in the large civil aircraft (LCA) industry as a result of its careful development of a family of products in response to market demand while pursuing a product development strategy of exploiting both new technologies and the benefits of commonality."[3694]

7.1767 Airbus describes itself as having followed this "product innovation strategy" successfully from its very first product (the A300) and notes that many of Boeing's new aircraft were introduced in response to new Airbus models: the A300/310 was followed by the 767; the A320 was followed by the 737NG; the A340/330 was followed by the 777 and according to Airbus (in early 2005), the 787 project "appears to be a response to the market success of the A330-200".[3695]

[3692] Jordan and Dorman Report, Exhibit US-3, p. 11.

[3693] Airbus, Key Determinants of Competitiveness in the Global Large Civil Aircraft Market: An Airbus Assessment, March 2005, Exhibit EC-719 (BCI), p. 12.

[3694] Airbus, Key Determinants of Competitiveness in the Global Large Civil Aircraft Market: An Airbus Assessment, March 2005, Exhibit EC-719 (BCI), p. 2.

[3695] Airbus, Key Determinants of Competitiveness in the Global Large Civil Aircraft Market: An Airbus Assessment, March 2005, Exhibit EC-719 (BCI), p. 11, footnote 2.

BCI deleted, as indicated **[***]**

7.1768 A NASA publication also points to the importance of competition through technological development, suggesting that it was Airbus' position as a new entrant in the market that led it to compete on the basis of innovation:

> "Airbus Industries, for example, has incorporated more advanced technology into its aircraft, including full flybywire controls, than the U.S. transport aircraft manufacturers have. But the European consortium had more motivation to innovate and less to lose than its U.S. counterparts. Boeing and McDonnell Douglas held such a commanding market position that unless Airbus distinguished itself significantly in some manner, it would be lost in Boeing's shadow."[3696]

7.1769 It is clear to us that the conditions of competition in the LCA industry are such that a subsidy that enhances an LCA manufacturer's ability to develop innovative technologies for application to its aircraft will potentially give rise to a significant competitive advantage to that manufacturer.

7.1770 The United States argues that the NASA R&D subsidies do not confer a competitive advantage on Boeing vis-à-vis Airbus because NASA-funded research is generally applicable, conceptual research, the results of which are publicly disseminated and therefore widely known and well understood within the global community of engineers and scientists working in a particular area.[3697] Moreover, according to the United States, many of the technologies that the European Communities attempts to link to the research that Boeing and McDonnell Douglas performed for NASA and DOD pursuant to the aeronautics R&D subsidies are supplied by third parties and are commercially available.[3698]

7.1771 The Panel notes that there are restrictions on the dissemination of certain aspects of NASA-funded research results, and that public dissemination does not occur immediately.[3699] Moreover, the nature of the aeronautics R&D subsidies suggests that Boeing gains a significant advantage from performing the R&D work itself, in collaboration with NASA, as well as from conducting research under the R&D subsidies in tandem with its own related R&D efforts. In any case, we do not think that it is very realistic to believe that NASA would so consistently and prominently state that the objectives of the aeronautics R&D programmes were to provide a competitive advantage to U.S. subsonic transport by accelerating the development of key, high payoff technologies if all of the NASA-funded R&D were in fact research that was publicly disseminated and equally available to Airbus. Nor is the Panel persuaded that the critical technologies that Boeing developed in collaboration with its suppliers are equally available to Airbus. The Panel notes that the United States

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[3696] Airborne Trailblazer, Chapter 1, Exhibit EC-288, p. 4.

[3697] See e.g. Bair Affidavit, Exhibit US-7, paras. 33-34; Affidavit of Branko Sarh, Exhibit US-1254, para. 5.

[3698] Bair Affidavit, Exhibit US-7, paras. 18-20, 58, 61, 64, 66, 69, 73. For example, components of the 787 that relate to its more-electric architecture, such as the starter engines, de-icing system, air conditioning system, secondary flight controls and brakes were supplied to Boeing by third parties, as were certain components relating to the 787's reduced noise, such as the joint-less inlet liners and landing gear. The Panel notes also that the Product Lifecycle Management Tools (including CATIA, DELMIA, ENOVIA and SMARTEAM) are supplied by Dassault.

[3699] For example, certain NASA and DOD contracts with Boeing contained limited access rights such as (i) limited exclusive data rights, (ii) for early domestic dissemination, and (iii) requirements for prior written approval before the release of certain technical information. Although differing in their nature and scope, each of these limited access rights seek to delay the foreign transfer of commercially sensitive information or prevent its public release without prior written approval of NASA or DOD; see European Communities' first written submission, Annex C, paras. 135-159.

has failed to rebut a critical assertion made by the European Communities in its HSBI submissions and evidence in this regard.[3700]

7.1772 Moreover, the argument that many of the technologies applied to the 787 are commercially available to Airbus from third party suppliers overlooks the importance of the knowledge and experience that Boeing obtained pursuant to the aeronautics R&D subsidies as an integrator of the various technologies. We agree with the following submission by the European Communities:

> "The critical question in developing and building LCA is *not* how to *get* the different technologies and design and manufacturing tools. The critical question is how to *use* them. Which tools out of many available tools should be used, in which way, by whom, and at which step of the design and build process? The ability to define and manage the complex interaction of design processes, organization and tools so as to enable the robust development and manufacturing of an aircraft at minimum time and cost is one of the core competencies of an aircraft manufacturer. This is the true challenge LCA integration poses to both Airbus and Boeing, and it is a challenge that Boeing can meet thanks in large part to NASA and DOD funding and support."[3701]

7.1773 The Panel concludes that the aeronautics R&D subsidies contributed in a genuine and substantial way to Boeing's development of technologies for the 787 and that, in the light of the conditions of competition in the LCA industry, these subsidies conferred a competitive advantage on Boeing. The Panel now proceeds to analyse whether the aeronautics R&D subsidies, as a result of this competitive advantage, affected Airbus' sales and prices in the 200 – 300 seat wide-body LCA product market in the 2004 – 2006 period.

Effects of the aeronautics R&D subsidies on Airbus' sales and prices in the 200 – 300 seat wide-body LCA product market

7.1774 We recall that the European Communities argues that, *but for* the aeronautics R&D subsidies, (i) Boeing could not have launched, in April 2004, a 787 family of LCA offering the many operating cost savings and enhancements in passenger comfort that have made it such a commercial success relative to the A330 and Original A350[3702]; and (ii) Boeing could not have contractually bound itself to make significant deliveries of the 787 starting in 2008.[3703] The Panel is aware that it should proceed with caution in attempting to assess, through the use of counterfactual analysis, how the aeronautics R&D subsidies affected Boeing's development of the 787. However, we are satisfied from the evidence that Boeing's assessment in the late 1990s that route fragmentation would lead to a larger number of lower-volume routes, best served by a mid-sized, extended range aircraft (a commercial assessment unrelated to the subsidies), along with the age of the 767, likely meant that Boeing needed to develop an LCA to replace the 767 in the 200 – 300 seat wide-body product market, and that it would have done so in the early- to mid- 2000s.[3704] The question is what sort of aircraft Boeing could have developed, and when that aircraft could have been launched and first entered into service, in the absence of the aeronautics R&D subsidies.

[3700] European Communities' second written submission, Full Version HSBI Appendix, para. 4; Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 HSBI, at para. 19.

[3701] European Communities' confidential oral statement at the first meeting of the Panel, para. 14.

[3702] Rather, according to the European Communities, it would have taken Boeing "years longer" as well as much more of its own money to do so; European Communities' first written submission, Annex C, para. 199.

[3703] European Communities' first written submission, Annex C, para. 199.

[3704] One could presumably also argue that Boeing would not have launched a new aircraft in this product market and would have continued to offer the 767, however, even the European Communities does not argue this.

BCI deleted, as indicated **[***]**

7.1775 We consider that two scenarios are most likely: Boeing would have developed a 767-replacement that incorporated all of the technologies that are incorporated on the 787, but its launch would have been significantly later than 2004 and it would not have been able to promise first deliveries for 2008, or Boeing would have launched a 767-replacement in 2004 that was technologically superior to the 767, but did not offer the degree of technological innovation of the 787. We do not have to reach any definitive view on which of these outcomes would have occurred. What is clear to us is that, absent the aeronautics R&D subsidies, Boeing would not have been able to launch an aircraft incorporating all of the technologies that are incorporated on the 787 in 2004, with promised deliveries commencing in 2008.

7.1776 The Panel recalls that European Communities alleges that subsidies benefiting the 787 caused the following forms of serious prejudice:

(a) Significant price suppression of the A330, Original A350 and A350XWB-800;

(b) Significant lost sales of A330 and Original A350;

(c) Displacement and impedance of imports into the United States for the A330 and Original A350;

(d) Displacement and impedance of exports from various third country markets for the A330 and Original A350; and

(e) Threat of price suppression with respect to future orders of A330 and A350XWB-800.[3705]

7.1777 Before we evaluate the specific market effects of the aeronautics R&D subsidies in this LCA product market, it is useful to recall the events leading to Airbus' development of the A350XWB in 2006. The European Communities asserts that, when Boeing launched the 787 in 2004, Airbus' A330 was the "undisputed market leader in the 200-300 seat LCA market".[3706] The Panel is satisfied based on the evidence that, at the beginning of 2004, Airbus expected that its A330 would remain the standard for the 200-300 seat LCA market for at least another 10 years of deliveries.[3707] In late 2004, in response to customer demands that Airbus offer an aircraft to match the 787 in terms of operating costs, Airbus designed an aircraft programme that would retain the A330 fuselage, but add a new composite wing and cabin improvements. Then in April 2005, Airbus redesigned that aircraft (now called the A350) to include a composite aft fuselage (but still sharing the same fuselage cross-section as the A330) and to make further improvements to the aerodynamics, increase the maximum take-off weight, add new landing gear and other improvements.[3708] Various models of the Original A350 were marketed from December 2004, however the Original A350 that featured a composite wing and

[3705] The European Communities also makes an alternate claim, conditional on the Panel disagreeing with the European Communities that all of its serious prejudice arguments should be assessed on the basis of orders rather than deliveries, of threat of significant price suppression, threat of significant lost sales and threat of displacement and impedance of imports and exports with respect to *future deliveries* of A330 and A350XWB-800 LCA; European Communities' first written submission, para. 1342.

[3706] European Communities' second written submission, Full Version HSBI Appendix, para. 10. The United States does not appear to dispute that the A330 was the market leader in this product market prior to the launch of the 787, see e.g. United States' first written submission, para. 981.

[3707] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 94.

[3708] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 102.

composite fuselage having the same cross-section as the A330 was launched in October 2005.[3709] Evidence before the Panel indicates that, notwithstanding the launch of the Original A350 in October 2005, certain key customers requested that Airbus launch a whole new LCA with technology equivalent to that on the Boeing 787.[3710] Accordingly, in December 2006, Airbus announced the launch of the redesigned A350XWB programme.[3711] First deliveries of the A350XWB-800 were not scheduled to be made until 2013, some five years after promised first deliveries of the 787.[3712]

7.1778 The European Communities argues that Airbus lost a significant number of sales of its A330 and Original A350 to the 787 because of the operating cost advantages of the 787, the fact that Boeing could provide the 787 in a shorter timeframe than Airbus could provide the Original A350, or because of the low price of the 787.[3713] The European Communities also argues that, although Airbus tried to compete against the 787 by offering the Original A350 in 2005, because Airbus did not have access to similar R&D subsidies, the Original A350 "fell short of the 787 in terms of technological advancements and delivery schedule".[3714] Moreover, the European Communities contends that the 787's subsidy-enhanced low prices and advanced technologies forced Airbus to lower the prices of its A330 and Original A350 in order to secure orders, thereby causing significant suppression of A330 and Original A350 prices.[3715]

7.1779 In addition, the European Communities argues that, although Airbus was able to launch the A350XWB-800, a technologically-comparable aircraft to the 787, in 2006, prices for the A350XWB-800 were also suppressed by the subsidies to the 787 because **[***.]**[3716]

7.1780 The Panel is satisfied that the European Communities has established that the technological and operating cost advantages of the 787 over the A330 and Original A350, as well as its scheduled delivery dates commencing in 2008, caused Airbus to lose a significant number of sales of its A330 and Original A350 between 2004 and 2006, and significantly suppressed the prices of those aircraft during that period. We are not persuaded, however, that the European Communities has adequately substantiated its argument that the technological and operating cost advantages of the 787, or its 2004 launch and scheduled first delivery date of 2008, has resulted in significant suppression of A350XWB-800 prices. We explain the basis for these conclusions below.

7.1781 First, we accept the proposition that with the launch of a technologically-advanced aircraft, the price of the competing, older technology aircraft can be expected to decline (along with its residual values). We are satisfied that this is what happened to the A330 when the 787 was launched

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[3709] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 103.

[3710] Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 110; United States' second written submission, HSBI Appendix, para. 16; Andrea Rothman and Susan Ray, "Redesign A350, Airbus told", Seattle Post-Intelligencer, 8 April, 2006, Exhibit US-1172; Scott Hamilton, Redesigning the A350: Airbus' tough choice, leeham.net, 4 April 2006, Exhibit EC-1251.

[3711] This family of LCA would span two LCA product markets: the 200-300 seat market (through the A350XWB-800, which would compete directly with the 787-8 and 787-9), and the 300-400 seat market (through the A350XWB-900/1000 which would compete with the 777 family).

[3712] The Panel is of course aware that Boeing was not ultimately able to deliver the 787 in 2008, however, the relevant fact for purposes of our analysis is that in 2004, Boeing believed that it would be able to make its first deliveries in 2008 (and made contractual promises to its customers to this effect).

[3713] European Communities' first written submission, paras. 1426-1455; European Communities' second written submission, Full Version HSBI Appendix, para. 10.

[3714] European Communities' first written submission, para. 1410.

[3715] European Communities' first written submission, paras. 1392-1393, 1410-1412.

[3716] The parties do not appear to dispute that the A350XWB-800, unlike the A330 and Original A350, was technologically competitive with the 787; see e.g. European Communities' second written submission, Full Version HSBI Appendix, para. 13.

BCI deleted, as indicated **[***]**

in 2004. We are persuaded that this left Airbus in a position in which it had to lower the price of the A330 in order to try to mitigate its loss of market share to the 787.[3717] We see in the data submitted to us an indication that price trends for the A330 declined after 2004 and that, from its former position as market leader in this product market, it lost market share to Boeing.

7.1782 We note that, as demonstrated in the diagram below, while demand for 200-300 seat wide-body LCA fell in 2002 (largely due to 9/11 and the SARS epidemic), but then rebounded in subsequent years, **[***]**[3718]

Orders for 200-300 Seat LCA vs. Price Per Seat of A330 Family LCA in Constant Dollars, 2000-2006[3719]

[***]

7.1783 Neither party has submitted global market share data based on orders for aircraft in the 200 – 300 seat wide-body LCA product market over the 2000 – 2006 period. However, based on data presented by the European Communities, the Panel has been able to reconstruct the following global market share data for orders of aircraft in the 200 – 300 seat wide-body LCA product market for the period 2000-2006.

Market share in the 200 – 300 seat wide-body LCA market (based on order data) in 2000 - 2006[3720]

Year	Airbus A330 and A350	Airbus Market share	Boeing 767 and 787	Boeing market share
2000	95	**91%**	9	**9%**
2001	52	**57%**	40	**43%**
2002	24	**75%**	8	**25%**
2003	49	**82%**	11	**18%**
2004	51	**46%**	59	**54%**
2005	129	**34%**	251	**66%**
2006	117	**40%**	173	**60%**

[3717] See e.g. Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 HSBI at para. 109. Because customers did not perceive the Original A350 to be as technologically advanced as the 787, its position in the market was similar to that of the A330; European Communities' second written submission, Full Version HSBI Appendix, para. 12; Scott Hamilton, "Redesigning the A350: Airbus' Tough Choice", leeham.net, 4 April 2006, Exhibit EC-1251. The United States asserts that the Original A350 "could not even come close to matching the operating efficiencies of Boeing's 787", United States' first written submission, U.S. Campaign Annex, paras. 7-8.

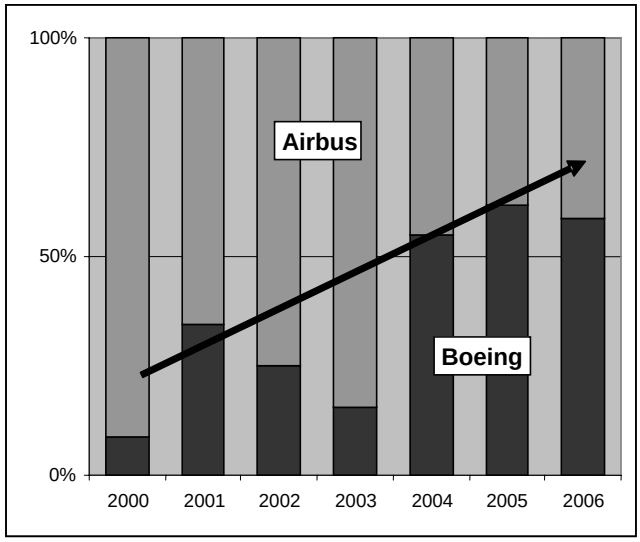
[3718] European Communities' first written submission, para. 1389; European Communities' response to question 306, para. 784.

[3719] European Communities' response to question 306, para. 784, Figure 3. Pricing information in this figure is based on Airbus proprietary data. Order information is based on Airclaims CASE database, data query as of 19 January 2007, Exhibit EC-3.

[3720] Compiled from data in Airclaims CASE Database, Data Query as of 19 January 2007, 2004 – 2006 Orders, Exhibit EC-1287 and Airclaims CASE Database, Data Query as of 19 January 2007, Exhibit EC-3.

BCI deleted, as indicated **[***]**

7.1784 The European Communities has illustrated the above market share trends on a graph as follows:[3721]



7.1785 The above market share figures show the rather dramatic erosion of Airbus' market share in the 2004 to 2006 period, compared with the 2000 – 2003 period. This erosion of the dominance of the A330 in this product market coincides with the introduction of the 787 in 2004. The evidence concerning the pricing trends for the A330, combined with the market share data, are consistent with what we would expect to occur from the introduction of a technologically-superior aircraft, offering operating cost advantages over older-technology aircraft, for around the same price. Clearly, one would expect that prices of the A330 would fall, and that it would lose market share, even in the face of significantly increased demand in that product market.[3722]

7.1786 Second, we are satisfied that evidence regarding specific sales campaigns that occurred in the 200 – 300 seat wide-body LCA product market between 2004 and 2006 demonstrates that the customer decided to purchase Boeing's 787 family LCA because either (i) it perceived that Airbus' A330 family and Original A350 family LCA were not as capable as Boeing's 787 family LCA in fulfilling its technical or delivery schedule requirements; or (ii) it considered Airbus' A330 family and Original A350 family LCA to be capable of meeting its technical and delivery schedule requirements, but was "swayed by the extremely low pricing offered by Boeing".[3723] In several of the sales campaigns in which the European Communities argues that the customer favoured the 787 owing to its technological features or availability in 2008[3724], it appears that factors other than the performance characteristics of the 787 over the A330 or Original A350, and the 2008 delivery date for the 787,

[3721] European Communities' confidential oral statement at the first meeting with the Panel, para. 33.

[3722] For example, the United States asserts that the performance gap between the Original A350 and the 787 was too large to bridge through price discounts (implying an erosion in both Airbus' prices and market share). In the Panel's view, the same reasoning is applicable to the A330; United States' first written submission, U.S. Campaign Annex, para. 8. For a concrete example, see the campaign discussed by the United States in its U.S. Campaign Annex at paras. 52-57. The United States explains that, despite Airbus offering extremely large discounts on the Original A350, it could not overcome the 787's value advantages and earlier availability; United States' first written submission, U.S. Campaign Annex, paras. 56-57.

[3723] European Communities' first written submission, para. 1427.

[3724] These sales campaigns are: All Nippon Airways (2004); Japan Airlines (2004); Continental Airlines (2004-2006); Icelandair (2005); Northwest (2005); Air Canada (2005); Qantas (2005); Kenya Airways (2006); Ethiopian Airlines (2005); Royal Air Maroc (2005).

played a significant part in the Boeing sale.[3725] However, the performance characteristics of the 787 and/or its scheduled entry into service in 2008 appear to have been the decisive factors in the outcomes of the Qantas, Ethiopian Airlines and Icelandair campaigns in 2005 and the Kenya Airways campaign in 2006.

7.1787 In the Panel's view, the Qantas, Ethiopian Airlines and Icelandair campaigns in 2005 and the Kenya Airways campaign in 2006, are evidence of sales that Airbus did not secure due to the advanced technological features of the 787, the availability of which at that time was accelerated by the aeronautics R&D subsidies. As such, they are evidence of lost sales that are the effects of the aeronautics R&D subsidies.

7.1788 The Panel notes that the Qantas sale in particular involved an order of 45 787s plus 20 options and a further 50 purchase rights.[3726] HSBI evidence submitted to the Panel supports other evidence indicating that this sales campaign was extremely competitive for various strategic reasons.[3727] Taking into account the size of the order, as well as these various other factors that singled out this campaign as being of particular importance to both Boeing and Airbus, we are satisfied that Airbus' loss of the Qantas sales campaign alone is evidence of a "significant" lost sale. The Panel is therefore satisfied that there is sufficient evidence to support its conclusion that, *but for* the effects of certain aeronautics R&D subsidies, Airbus would have made additional sales of the Original A350, and to that extent, would not have suffered significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement.

7.1789 The market impact of the effects of the aeronautics R&D subsidies on Airbus aircraft were initially felt with the launch of the 787 in 2004, and is reflected in market share data on the basis of *orders* obtained in the 2004 – 2006 period. The European Communities argues that, to the extent that it has identified orders as the cause of displacement or impedance that has not yet resulted in deliveries, future deliveries resulting from those orders are evidence of a *threat* of displacement and impedance.[3728] In this regard, the European Communities argues that the subsidies cause a threat of displacement and impedance of exports from third country markets related to future deliveries of relevant Airbus LCA that result from orders booked in 2004-2006.[3729]

7.1790 The European Communities has presented the following market share data for the relevant third country markets pertaining to the Qantas, Ethiopian Airlines, Kenya Airways and Icelandair

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[3725] These factors include Boeing's relationship with the airline (Continental Airlines, All Nippon Airways, Japan Airlines), the particular routes to be serviced and range of the aircraft (Northwest, All Nippon Airways, Japan Airlines), the effect of the A340/777 competition and preference of the airline for a mixed fleet (Air Canada), and the failure to submit a formal offer within the time limit specified by the airline (Royal Air Maroc).

[3726] Boeing/ Airbus Press Reports, Exhibit EC-1157, pp. 430-432, 467-469.

[3727] Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 HSBI, paras. 108-109. See also, Boeing/ Airbus Press Reports, Exhibit EC-1157, pp. 430-432, 467-469.

[3728] European Communities' first written submission, paras. 1455-1458, 1466-1468, 1552-1555, 1562, 1640-1643, 1650-1651; European Communities' confidential oral statement at the first meeting with the Panel, para. 90.

[3729] European Communities' first written submission paras. 1455, 1552 and 1640. This argument is part of the European Communities' more general alternative argument that, should the Panel reject the European Communities' use of orders as the basis for its present serious prejudice claim, the subsidies benefiting the relevant Boeing LCAs cause a threat of serious prejudice with respect to future *deliveries* of the "like" Airbus LCA. The Panel notes that Australia also argues that, notwithstanding that delivery of an LCA may not eventuate, orders are an indication of the effect of the subsidies on the industry and the market, through future projected sales and market share. According to Australia, they therefore give an indication as to how current subsidies are likely to affect the market in the future and thus the threat of serious prejudice; Australia's written submission, para. 69.

campaigns referred to above, based on actual delivery data (for the years up to and including 2006) and projected future deliveries (for the years 2007 onwards) on the basis of actual order data:[3730]

		Airbus		**Boeing**	
Australia	2002	2	100%	--	--
	2003	4	100%	--	--
	2004	5	100%	--	--
	2005	3	100%	--	--
	2006	1	100%	--	--
	2007	4	100%	--	--
	2008	4	50%	4	50%
	2009	3	27%	8	73%
	2010	1	10%	9	90%
	2011	--	--	7	100%
	2012	--	--	14	100%
	2013	--	--	3	100%
Ethiopia	2003	--	--	1	100%
	2004	--	--	1	100%
	2005	--	--	1	100%
	2006	--	--	--	--
	2008	--	--	1	100%
	2009	--	--	1	100%
	2010	--	--	3	100%
	2011	--	--	2	100%
	2012	--	--	3	100%
Kenya	2001	--	--	3	100%
	2010	--	--	2	100%
	2011	--	--	4	100%
	2012	--	--	3	100%
Iceland	2010	--	--	2	100%
	2012	--	--	2	100%

7.1791 Given the delay between the order of an aircraft and its delivery, the impact of the aeronautics R&D subsidies on Airbus' sales in these country markets will not be reflected in delivery data until the 787 is delivered, some years after 2006. However, it is clear that at that time, the European Communities will suffer serious prejudice in the form of displacement and impedance of its exports from these third country markets. In these circumstances, the Panel considers that the sales that Airbus has lost due to the effects of the aeronautics R&D subsidies also constitute evidence a threat of of serious prejudice. The Panel is therefore satisfied that, *but for* the effects of certain of the aeronautics R&D subsidies, Airbus would have obtained additional orders for its A330 or Original

[3730] Airbus and Boeing Deliveries and Projected Deliveries in the Challenged Markets, Exhibit EC-1173.

A350 LCA from customers in third country markets in Australia, Ethiopia, Kenya, and Iceland, and thus would not have suffered the threat of displacement or impedance of its exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement.

7.1792 The European Communities has also identified certain sales that Airbus was able to secure by offering **[***]** in order to offset the technological advantages and operating cost savings offered by the 787.[3731] As we have already indicated, we are satisfied that the technologies applied to the 787 resulted in an aircraft that offered substantial operating cost reductions to its customers, and that the combination of the superior technology and lower operating costs of the 787 clearly affected the comparative value of Airbus' A330 and Original A350, leaving Airbus no other option but to reduce the prices of its aircraft in order to compete.[3732] The evidence concerning the degree of price concessions that Airbus offered in order to secure sales of its A330 and Original A350 indicates that a further effect of the aeronautics R&D subsidies was significant price suppression with respect to the A330 and Original A350.[3733]

7.1793 The European Communities also alleges that a further effect of the aeronautics R&D subsidies is significant price suppression of the A350XWB-800. There is no evidence before the Panel as to price trends for the A350XWB-800, nor has the European Communities presented evidence concerning the actual pricing of the A350XWB in the context of specific LCA sales campaigns. Evidence before the Panel indicates that Airbus regards the A350XWB-800 as being technologically equal, if not superior, to the 787, meaning that there would be no need for Airbus to offer price discounts in order to offset the value of technological innovation of the 787, as was the case with the A330 and Original A350.[3734] The European Communities asserts that **[***]**.[3735] In addition, Airbus' Christian Scherer asserts that, even though the A350XWB is technologically competitive with the 787, it is still at a competitive disadvantage due to the fact that it is not available for delivery until 2013.[3736] Although the Panel considers it quite credible that customers that had previously ordered the Original A350 would request, in their negotiations with Airbus, that they receive the same price for an admittedly superior product, we do not consider that it necessarily follows that Airbus had no other option but to accede to such requests, particularly if the A350XWB-800 is regarded as a technologically superior product to the Original A350. We also consider it quite plausible that sales of the A350XWB-800 may be disadvantaged relative to the 787 because the A350XWB-800 will not be ready for delivery until 2013. However, the Panel would require some evidence in this regard in order to make an objective assessment of this issue.

[3731] European Communities' first written submission, para. 1393; European Communities' second written submission, HSBI Appendix, para. 10.

[3732] The United States argues that Boeing's 787 manufacturing costs have been lowered significantly by using commercially available product life cycle management and design software, sourcing common materials across suppliers, and standardizing customer-selected options; United States' second written submission, HSBI Campaign Annex, para. 22. While the Panel has no reason to doubt that these commercial decisions did result in manufacturing cost savings, we note that one of the major focuses of the aeronautics R&D subsidies was the development of innovative technologies that result in lower direct operating costs to airlines.

[3733] For example, Airbus sold the Original A350 to one customer for significantly less than it had sold the A330 to that same customer several years earlier, European Communities' second written submission, Full Version HSBI Appendix, para. 71.

[3734] See, for example, Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 115; "Airbus goes for extra width", Flight International, 25 July 2006, Exhibit US-302.

[3735] European Communities' first written submission, para. 1424; Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 114.

[3736] Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 BCI, para. 115.

7.1794 The Panel is therefore satisfied, based on the evidence reviewed in the preceding paragraphs, that the aeronautics R&D subsidies contributed in a genuine and substantial way to Boeing's development of technologies for the 787 and that, as a result, *but for* the effects of these subsidies (i) Airbus would have obtained additional orders for its A330 and Original A350 LCA from customers in third country markets Australia, Ethiopia, Kenya and Iceland in 2005 and 2006, and the European Communities would not have suffered the threat of displacement or impedance of exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement; (ii) Airbus would have made additional sales of the A330 and Original A350 over the same period, and to that extent, would not have suffered significant lost sales in the 200 – 300 seat wide-body LCA product market, within the meaning of Article 6.3(c) of the SCM Agreement; and (iii) prices of the A330 and the Original A350 in the 2004 to 2006 period would have been significantly higher, and to that extent, Airbus would not have suffered significant price suppression in the 200 – 300 seat wide-body LCA product market, within the meaning of Article 6.3(c) of the SCM Agreement.

7.1795 In reaching the above conclusions, the Panel has also taken into account the evidence and arguments advanced by the United States regarding certain factors that, in the view of the United States, explain the difficulties initially experienced by Airbus in competing with the 787 during the 2004 – 2006 period.[3737] We recall that the United States' principal argument in this regard is that Airbus' problems with the Original A350, and its inability to launch the A350XWB earlier than 2006 were not due to its lacking access to key technologies, but because Airbus' resources in the early 2000s were committed to the A380.[3738] According to the United States, Airbus' position in the 200-300 seat wide-body market segment was a matter of its strategic choice to focus on mastering the technology of a super-jumbo that was designed to service hub-to-hub routes, while Boeing decided to focus on a smaller, more fuel-efficient point-to-point aircraft that could build on existing, generally available developments in composite technology and reductions in composite costs.[3739] The United States also argues that, having decided to go in a different direction to Boeing, Airbus compounded its own problems after the 787 launch by trying to rush the development of a competing A350 based on a quick reworking of the A330.[3740]

7.1796 In our view, the United States' arguments concerning the effect of the A380 and A400M programmes on Airbus' product development in the 200 - 300 seat product market are not exactly germane. The proper focus of the Panel's analysis is on the effects of the aeronautics R&D subsidies on *Boeing's* product development behaviour, and it is clear to us that the aeronautics R&D subsidies conferred a competitive advantage on Boeing. Even if we were to assume *arguendo* that Airbus had made a strategic decision that risked leaving it commercially vulnerable in the 200 – 300 seat wide-body LCA product market if Boeing decided to launch a new-technology aircraft before 2006, what is of relevance to the Panel's assessment is the role of the R&D subsidies in enabling Boeing to launch a new technology aircraft before 2006 and thereby exploit that vulnerability to Airbus' detriment.

[3737] United States' first written submissions, paras. 916-928; United States' comments on European Communities' response to question 87, para. 310; Interview with Noel Forgeard: "I wanted to limit the costs for Airbus", Süddeutsche Zeitung, 20 May 2006, Exhibit US-1228; Interview with Thomas Enders, "We have made mistakes", Welt am Sonntag, 14 May 2006, Exhibit US-1229; United States' second written submission, HSBI Appendix, para. 12; "Airbus/EADS officials concede Boeing advantage, question A350 viability", Air Transport Daily News, 6 October 2006, Exhibit US-1167; Robert Wall, "A350 Faces Busy Time Until Industrial Launch", Aviation Week & Space Technology, 20 June 2005, Exhibit US-296; Noel Forgeard and the A380, Commercial Aviation Report, January 1 and 15, 2007, Exhibit US-297.

[3738] United States' first written submission, para. 714. During this period, according to the United States, Airbus was also developing the A400M military transport.

[3739] United States' first written submission, para. 714.

[3740] United States' first written submission, para. 714.

BCI deleted, as indicated **[***]**

Conclusion

7.1797 In conclusion, the Panel finds that the effect of the aeronautics R&D subsidies is a threat of displacement and impedance of European Communities' exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement, with respect to the 200-300 seat wide-body LCA product market, and significant lost sales and significant price suppression, within the meaning of Article 6.3(c) of the SCM Agreement with respect to that product market, each of which constitute serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement.

(ii) Whether the subsidies at issue in this dispute cause serious prejudice to the interests of the European Communities by reason of their effect on Boeing's pricing behaviour with respect to the 737NG, 777 and 787.

7.1798 As explained above in subsection 2(b)(ii), the difference between the European Communities' arguments in respect of the 787, on the hand, and the 737NG and 777 on the other, is that in the case of the 787, the European Communities submits that there are two principal effects of the subsidies that cause serious prejudice ("technology effects" and "price effects"), whereas in the case of the 737NG and the 777, the European Communities argues that serious prejudice is caused by one principal effect of all the subsidies ("price effects").

7.1799 In subsection 2(c)(i) above, the Panel has found that the aeronautics R&D subsidies, through their effects on Boeing's development of technologies (so-called "technology effects"), have caused serious prejudice to the interests of the European Communities in the 200-300 seat wide-body LCA product market. In this subsection, the Panel examines whether all of the subsidies at issue have caused serious prejudice to the interests of the European Communities by reason of their effect on Boeing's pricing behaviour with respect to 737NG, 777 and 787.

7.1800 The European Communities asserts that the subsidies at issue have "price effects" in that they either reduce Boeing's marginal unit costs or operate to increase Boeing's non-operating cash flow. The Panel first analyzes the effects of the subsidies that are said to reduce Boeing's marginal unit costs before turning to consider the effects of the other subsidies at issue in this dispute on Boeing's pricing, and ultimately, on Airbus' prices and sales in each of the three LCA product markets.

Effects on Boeing's pricing of subsidies alleged to affect Boeing's marginal unit costs

7.1801 The European Communities has identified three of the challenged measures as operating to reduce the marginal unit costs that Boeing incurs in relation to the production and sale of individual LCA. These measures are (i) the FSC/ETI exemptions and exclusions, (ii) the Washington State and City of Everett B&O tax reductions and (iii) the waiver of landing fees granted by Snohomish County for 747LCFs carrying 787 parts and components to Everett for final assembly.[3741] We recall that the Panel has found that only the FSC/ETI measures and the state and municipal B&O tax reductions are specific subsidies[3742] and we therefore examine the effects of these two subsidies on Airbus' prices and sales in the 2004 – 2006 period.

7.1802 The FSC/ETI subsidies are tax measures that are structured as reductions in Boeing's overall tax liability by excluding a portion of export-related foreign-source income from taxation. The FSC/ETI tax exemptions/exclusions are realized on the delivery of every LCA that Boeing exports, as well as on LCA that Boeing produces and sells to domestic carriers and leasing companies for use predominantly on foreign routes. In other words, the FSC/ETI subsidies directly relate to revenue

[3741] European Communities' first written submission, para. 1233.
[3742] See paras. 7.1406, 7.212, 7.302, 7.346, 7.516 of this Report.

realized from export LCA sales and operate to reduce the revenues that are subject to taxation, thereby lowering Boeing's taxes and increasing its after-tax profits. As we explain in the Part of this Report in which we make a finding that the FSC/ETI measures are prohibited export subsidies within the meaning of Article 3.1(a) of the SCM Agreement[3743], the U.S. government, through the TIPRA[3744], repealed certain aspects of the grandfathering of FSC and ETI tax breaks for tax years beginning after 2006, and as Boeing will not deliver the 787 to any of its customers before that date, Boeing will not realize FSC/ETI tax exemptions and exclusions in relation to the sale of the 787. Indeed, the European Communities does not suggest that the FSC/ETI subsidies have affected the prices of the 787 and has not allocated the FSC/ETI subsidies to the 787 for purposes of its serious prejudice arguments.[3745] Our analysis of the effects of the FSC/ETI subsidies therefore proceeds on the basis that these subsidies can only have affected Boeing's pricing of the 737NG and 777, and thus can only have had effects in the 100-200 seat single-aisle, and 300-400 seat wide-body LCA product markets, respectively.

7.1803 The Washington State B&O tax subsidies were among the various tax incentives introduced by the Washington State Legislature under House Bill 2294 (HB 2294). Evidence before the Panel indicates that the purpose or intent behind the tax reform package in HB2294 was to reduce Boeing's cost structure and thereby significantly improve Boeing's competitiveness.[3746] The City of Everett's B&O tax reduction was a component of the incentives provided through the MSA. The Ordinance enacting the City of Everett B&O tax reduction states that the B&O tax reduction is intended to create an estimated net present value reduction of approximately $35 million, based on current estimated aircraft production and sales, and a six per cent discount rate over a 20 year period beginning in 2004.[3747] The Washington State B&O tax reductions apply to the production and sale of LCA manufactured in Washington State, and therefore potentially affect the production and sale of the 737NG, 777 and 787 families of Boeing LCA. The City of Everett B&O tax reductions affect the production and sale of LCA manufactured in Everett, and therefore apply to the 777 and 787 families of Boeing LCA.

7.1804 The Panel recalls that in *US – Upland Cotton*, the panel considered that it was entitled, under Articles 5(c) and 6.3(c) of the SCM Agreement, to conduct an integrated examination of the effects of any subsidies with a sufficient nexus with the subsidized product and the particular effects-related variable under consideration.[3748] The panel stated:

> "Thus, in our price suppression analysis under Article 6.3(c), we examine one effects-related variable – prices – and one subsidized product – upland cotton. To the extent a sufficient nexus with these exists among the subsidies at issue so that their effects manifest themselves collectively, we believe that we may legitimately treat them as a "subsidy" and group them and their effects together." [3749]

7.1805 We note that the European Communities has grouped the FSC/ETI subsidies and the B&O tax subsidies together as subsidies that operate to reduce Boeing's marginal unit costs. The United States also submits that the FSC/ETI subsidies and B&O tax subsidies share certain similarities in structure and operation such that it is appropriate that the Panel conduct an aggregate analysis of their effects.[3750] The Panel considers that it is appropriate to aggregate the FSC/ETI subsidies and the B&O

[3743] See paras. 7.1450-7.1464 of this Report.
[3744] See above, para. 7.1385 of this Report.
[3745] European Communities' first written submission, para. 1230, Figure 15.
[3746] Washington State 7E7 Presentation, slide 9, Exhibit EC-66.
[3747] Everett Ordinance 2759-04 (2004), § 1, Exhibit EC-61.
[3748] Panel Report, *US – Upland Cotton*, para. 7.1192.
[3749] Panel Report, *US – Upland Cotton*, para. 7.1192.
[3750] United States' first written submission, paras. 767, 768.

tax subsidies for purposes of analyzing their effects. In our view, in order to conduct an aggregated analysis of the effects of subsidies in the context of this dispute, it should be possible to discern from their structure, design and operation that they affect Boeing's behaviour in a similar way.

7.1806 The European Communities has analyzed the FSC/ETI subsidies and B&O tax subsidies as subsidies that are realized on the production and delivery of individual LCA, and which directly reduce Boeing's marginal unit costs for the production and sale of each LCA that benefits from them.[3751] While the United States does not consider that it is accurate to describe the subsidies as reducing Boeing's marginal unit costs[3752], it considers that both subsidies lead to an increase in revenues after the transaction (the sale of an LCA).[3753] In this sense, both subsidies are directly tied to sales of individual LCA. The United States agrees that, as a matter of economics, subsidies that are tied to sales have an impact on those sales.[3754] It also acknowledges that Boeing's LCA prices are affected by, *inter alia*, changes in Boeing's product-specific fixed and variable costs[3755] and endorses the view that product-specific subsidies can have a significant impact on prices and output.[3756]

7.1807 The FSC/ETI subsidies reduce the revenues from certain sales of aircraft on which Boeing is taxed, while the B&O tax subsidies directly reduce the rate at which Boeing's gross revenues from the manufacture of aircraft are taxed. The State of Washington B&O tax is levied on the gross proceeds of sale, gross incomes of a business or the value of products.[3757] The City of Everett B&O tax is a tax on gross revenues which, with respect to manufacturing, are generally treated as the value of products manufactured.[3758] In general terms, the subsidies lower taxes that Boeing pays and thereby increase Boeing's after-tax profits. Both the FSC/ETI and B&O tax subsidies increase the profitability of LCA sales in a way that enables Boeing to price its LCA at a level that would not otherwise be commercially justified. In short, the FSC/ETI subsidies and the B&O tax subsidies, by lowering the taxes incurred in connection with sales of LCA, clearly have a far more direct and immediate relationship to aircraft prices and sales than other subsidies at issue in this dispute, such as the aeronautics R&D subsidies.

7.1808 In addition, we recall that the FSC/ETI subsidies have been the subject of previous WTO dispute settlement and in that context, have been found to be prohibited export subsidies within the meaning of Article 3.1(a) of the SCM Agreement.[3759] We also make a finding in this Report that the FSC/ETI measures are prohibited export subsidies.[3760] The FSC/ETI subsidies not only bear a more direct relationship to Boeing's LCA prices than the aeronautics R&D subsidies, but they are also, by virtue of their very nature as export subsidies, more likely to cause adverse trade effects. We note in this regard that the Appellate Body has stated:

> "There is no logical reason why the Members of the WTO would, in conceiving and concluding the *SCM Agreement*, have granted panels the authority to draw inferences in cases involving actionable subsidies that *may* be illegal *if* they have certain trade

[3751] European Communities' first written submission, para. 1241.
[3752] United States' first written submission, para. 751.
[3753] United States' first written submission, paras. 751-752.
[3754] United States' comments on the European Communities' response to question 289, para. 540.
[3755] United States' response to question 298, para. 522.
[3756] Stiglitz and Greenwald, On the Question of the Impact of Subsidies on Supply and Prices in the LCA Market, US-1309, para. 4.
[3757] See para. 7.47 of this Report.
[3758] See para. 7.306 of this Report.
[3759] See paras. 7.1452-7.1455 of this Report.
[3760] See para. 7.1464 of this Report.

> effects, but not in cases that involve prohibited export subsidies *for which the adverse effects are presumed*."[3761]

7.1809 The panel in *Brazil – Aircraft* explained the inherently trade-distorting nature of export subsidies as follows:

> "In our view, the object and purpose of the SCM Agreement is to impose multilateral disciplines on subsidies which distort international trade. It is for this reason that the SCM Agreement prohibits two categories of subsidies -- subsidies contingent upon exportation and upon the use of domestic over imported goods -- *that are specifically designed to affect trade*."[3762]

7.1810 In our view, precisely because the FSC/ETI subsidies are contingent on Boeing making export sales, we are entitled to determine, absent reliable evidence to the contrary, that by their very nature, they will have trade distortive effects.[3763]

7.1811 We have previously estimated the amount of FSC/ETI subsidies related to sales of LCA that Boeing and McDonnell Douglas received from FSC and ETI tax exemptions and exclusions from 1989 through 2006 to be approximately $2.2 billion.[3764] The European Communities' consultants, ITR, estimate that, of the $2.2 billion in FSC/ETI subsidies received by Boeing with respect to its sales of LCA between 1989 and 2006, Boeing received approximately $153 million, $142 million and $140 million, respectively, in the years 2004 to 2006.[3765] As set forth in paragraphs 7.254 and 7.353 of this Report, the Panel has estimated that the amount of the State of Washington B&O tax reduction that was received directly by Boeing through 2006 is $13.8 million, while the amount of the City of Everett B&O tax reduction received by Boeing through 2006 is $2.2 million.

7.1812 As discussed in paragraphs 7.155-7.157 of this Report**,** the European Communities has allocated the full amount of the value of B&O tax subsidies estimated to be received by Boeing in 2007 – 2009 to the period 2004 – 2006 as part of ITR's allocation of subsidy amounts over time, to arrive at estimates of per-LCA subsidy "magnitudes".[3766] Although the Panel does not disagree with the general proposition that the expectation of the receipt of a subsidy may affect a recipient's behaviour, and thus give rise to a market effect prior to its actual receipt, the Panel does not consider that this should automatically lead to the mechanical allocation of amounts of recurring subsidies that reduce Boeing's marginal unit costs back in time by three years. The implication of such an allocation would be that the subsidy does not give rise to serious prejudice, within the meaning of Article 6.3, in the year of its receipt. As we have explained in paragraph 7.1685, the Panel does not accept this implication. Rather, the Panel considers that given the particularities of LCA production and sale, the effects of the subsidies should be understood to begin at the time at which an LCA order is obtained

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[3761] Appellate Body Report, *Canada – Aircraft*, para. 202. Emphasis added.

[3762] Panel Report, *Brazil – Aircraft*, para. 7.26. Emphasis added. See also the statement of the arbitrator in *US - FSC (Article 22.6 – US*): "Export subsidies do, after all, have "adverse effects" on third parties. Systemically speaking they are, as a category of subsidy, more inherently prone to do so than any other". Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 5.35.

[3763] That being said, as we note below, there is in fact in this case reliable evidence which confirms that determination; see e.g. paras. 7.1806-7.1807, 7.1811, and 7.1817-7.1823.

[3764] See para. 7.1419 of this Report.

[3765] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007, Exhibit EC-13, Appendix A, p. 3.

[3766] International Trade Resources LLC, Calculating on a Per-Aircraft Basis the Magnitude of the Subsidies Provided to US Large Civil Aircraft, 20 February 2007. The European Communities' methodology for allocating subsidy amounts to arrive at annual and per-LCA subsidy "magnitudes" is described in paras. 7.1616-7.1617 of this Report.

(or an order is lost) and to continue up to and including the time at which that aircraft is delivered (or not delivered).

7.1813 Moreover, we note that the European Communties' allocation of the post-2006 amounts of B&O tax subsidies estimated to be received by Boeing in 2007 – 2009 to the period 2004 – 2006 arises in the specific context of ITR's allocation of subsidies received by Boeing between 1989 and 2006, over time and across particular models of LCA, for purposes of estimating per-LCA subsidy "magnitudes" and *ad valorem* rates of subsidization for each family of Boeing LCA. ITR's per-LCA subsidy "magnitude" estimates play no part in the Panel's analysis of the effects of the subsidies. We therefore see no reason or need to effectively shift the amounts of recurring subsidies received by Boeing backwards through time for purposes of our serious prejudice analysis in the way in which ITR has done for purposes of its subsidy "magnitude" calculations.

7.1814 The issue before the Panel is whether the availability of FSC/ETI subsidies and B&O tax subsidies enabled Boeing to compete on price in individual sales, and secure sales that it would not otherwise have made, and where it did not win those sales, led to Airbus securing those sales at lower prices than it would otherwise have obtained. The United States argues that the amounts of the FSC/ETI subsidies received by Boeing were too small relative to Boeing's order revenues to have affected Boeing's pricing to a degree that would lead to it winning sales that it would not otherwise have won, or forcing Airbus to win sales only at lower prices than it would otherwise have obtained. It presents the following calculations in this regard:[3767]

	Value of orders	**FSC/ETI magnitude**	**Ratio of subsidy to order value**
2000	$32,591	$266	1:122
2001	$16,588	$197	1:84
2002	$12,585	$179	1:70
2003	$9,771	$107	1:91
2004	$16,650	$153	1:109
2005	$67,193	$142	1:473
2006	$61,579	$140	1:440

7.1815 ITR criticizes the United States' allocation of FSC/ETI subsidy amounts over order values, which it argues fails to reflect the reality that the FSC/ETI subsidies accrue against aircraft sales revenues, not orders.[3768] ITR notes that the FSC/ETI subsidy is based on a fixed percentage of broadly defined export revenue or earnings, and argues that any *ad valorem* rates of subsidization should be based on the sales revenue against which the subsidies accrued. ITR presents the following table showing FSC/ETI subsidies calculated as a percentage of Boeing's annual revenue from aircraft deliveries between 2000 and 2006:[3769]

[3767] United States' first written submission, para. 815; see also United States' second written submission, para. 175 and footnote 272; United States' comment on European Communities' response to question 229, paras. 418-420; United States' comment on European Communities' response to question 269, para. 469. The European Communities disagrees with the United States' position that the alleged tax benefits were not significant enough to affect Boeing's supply of LCA; European Communities comments on United States' response to question 389, para. 403.

[3768] ITR LLC Response to US Criticisms of ITR Subsidy Magnitude Report, 1 November 2007, Exhibit EC-1181, para. 15.

[3769] ITR LLC Response to US Criticisms of ITR Subsidy Magnitude Report, 1 November 2007, Exhibit EC-1181, para. 16.

BCI deleted, as indicated **[***]**

Year	Delivery Revenue	FSC/ETI Subsidies	
		Amount	% Delivery Revenue
2000	24,792	266	1.07%
2001	27,251	197	0.72%
2002	22,100	179	0.81%
2003	16,637	107	0.64%
2004	15,905	153	0.96%
2005	14,777	142	0.96%
2006	21,562	140	0.65%

7.1816 We do not consider that either measure is particularly informative or illustrative of the capacity for the FSC/ETI subsidies to have affected Boeing's prices, and by extension, Airbus' prices and sales.

7.1817 It is important to bear in mind that the FSC/ETI subsidies are export subsidies that are designed to increase Boeing's competitiveness through its pricing of LCA for export. The European Communities has provided evidence concerning a sales campaign in 1996 in which an Airbus negotiator states that, owing to Boeing's lower pricing due to its receipt of FSC subsidies, his team was asked by the customer to reduce its price by a further $4 million per aircraft.[3770] The U.S. Trade Representative described the general purpose of the FSC/ETI provisions as being to enhance the international competitiveness of U.S. companies.[3771] A 2003 report on FSC/ETI beneficiaries indicates that, over the six-year period ended in 2002, Boeing was the largest FSC/ETI beneficiary.[3772] Moreover, Boeing itself seems to have regarded the FSC/ETI measures to be an important aspect of its ability to compete. In 2003, Mr. James H. Zrust, Vice President of Tax at Boeing, delivered a statement to the United States Senate regarding the importance of the FSC/ETI tax benefits to Boeing. As Vice President of Tax at Boeing, Mr. Zrust would have been very highly qualified to speak to this issue. In his statement, Mr. Zrust made clear that repealing Boeing's ETI benefits without a "suitable replacement" would have an adverse effect on Boeing's position "vis-a-vis foreign competitors", and stated that while repealing ETI without a suitable replacement would have an adverse impact on the "international competitiveness" of all U.S. exports, it would be "especially devastating to the U.S. aerospace industry".[3773] He spoke about the importance of ETI for "U.S. companies competing against foreign firms, which are often heavily subsidized by their governments".[3774] He reiterated that any repeal of ETI benefits without a suitable replacement would be "particularly detrimental to U.S. competitiveness", and that the loss of a tax benefit that:

[3770] Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 56.

[3771] Statement of Robert B. Zoellick, U.S. Trade Representative before the Committee on Finance of the U.S. Senate, 30 July 2002, Exhibit EC-629, at p. 74; WTO's Extraterritorial Income Decision: Hearing before House Comm. on Ways and Means 107th Cong. 35 (2992) (response to questions by Barbara Angus, International Tax Counsel, U.S. Department of the Treasury), Exhibit EC-630, at p. 35.

[3772] European Communities' first written submission, para. 947, Jose Oyola, FSC-ETI Beneficiaries: An Updated Profile, Tax Notes International, 6 October 2003, Exhibit EC-632.

[3773] Statement of James H. Zrust, Vice President of Tax, the Boeing Company, before the Committee on Finance of the U.S. Senate, 8 July 2003, Exhibit EC-631, p. 187.

[3774] Statement of James H. Zrust, Vice President of Tax, the Boeing Company, before the Committee on Finance of the U.S. Senate, 8 July 2003, Exhibit EC-631, p. 187.

BCI deleted, as indicated **[***]**

> "{A}llows U.S. exporters to compete fairly with European exporters may well translate into a reduction in R&D investments, higher capital costs, and lost market share over time."[3775]

7.1818 These considerations point quite clearly to the significance of the FSC/ETI subsidies to Boeing's ability to compete on price against Airbus. We have no doubt that the availability of the FSC/ETI subsidies, in combination with the B&O tax subsidies, enabled Boeing to lower its prices beyond the level that would otherwise have been economically justifiable, and that in some cases, this led to it securing sales that it would not otherwise have made, while in other cases, it led to Airbus being able to secure the sale only at a reduced price. We note further that, to the extent that these subsidies have enabled Boeing to win sales from Airbus in the past, they have served to entrench Boeing as the incumbent supplier, thereby putting it at an important switching cost advantage over Airbus in future sales of aircraft of the same family to that same customer.[3776]

7.1819 The FSC/ETI programme was in operation prior to 2000, and it is therefore not possible for the Panel to ascertain the effects of the subsidies from direct observation of market share and pricing trend data over the 2000 – 2006 period. The United States' explanations of factors that it considers explain the prices and performance of Airbus LCA relative to Boeing LCA in the 100 – 200 seat single aisle, and 300 – 400 seat wide-body product markets in the 2004 – 2006 period similarly do not reverse or attenuate the pervasive and consistent pricing advantage that Boeing had in LCA campaigns in the 2001 – 2003 period due to the availability of the FSC/ETI subsidies.[3777]

7.1820 The Panel considers that in these circumstances, it is necessary and appropriate to deduce the effects of the FSC/ETI subsidies and the B&O tax subsidies on Airbus' sales and prices over the 2004 – 2006 period, based on commonsense reasoning and the drawing of inferences from conclusions regarding the nature of these subsides as subsidies that increase the profitability of LCA sales in a way that enables Boeing to price its LCA at a level that would not otherwise be commercially justified, the duration of the FSC/ETI subsidies, as well as from what we understand of the nature of competition between Airbus and Boeing, particularly the price-sensitive nature of certain significant LCA sales campaigns and the pricing advantage afforded to incumbent suppliers through the phenomenon of buyer switching costs. We consider this approach to be consistent with our obligation under Article 11 of the DSU to make an objective assessment of the facts. In this regard, we note that the Appellate Body, in *Canada – Aircraft*, indicated that drawing inferences from facts on the record is a routine and inherent aspect of a panel's discharging its obligation under Article 11 of the DSU:

> "The DSU does not purport to state in what detailed circumstances inferences, adverse or otherwise, may be drawn by panels from infinitely varying combinations of facts. Yet, in all cases, in carrying out their mandate and seeking to achieve the "objective assessment of the facts" required by Article 11 of the DSU, panels routinely draw inferences from the facts placed on the record. The inferences drawn may be inferences of fact: that is, from fact A and fact B, it is reasonable to infer the existence of fact C. Or the inferences derived may be inferences of law: for example, the ensemble of facts found to exist warrants the characterization of a "subsidy" or a "subsidy contingent … in fact … upon export performance". The facts must, of

[3775] Statement of James H. Zrust, Vice President of Tax, the Boeing Company, before the Committee on Finance of the U.S. Senate, 8 July 2003, Exhibit EC-631, p. 190.

[3776] Switching costs refer to the costs that buyers who operate one particular family of aircraft must incur to switch to a new supplier (such costs stem from pilot training, aircraft maintenance etc.). See Rod P. Muddle, The Dynamics of the Large Civil Aircraft Industry, March 2007, Exhibit EC- 10, para. 97; Christian Scherer, Commercial Aspects of the Aircraft Business From the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 53; Jordan and Dorman Report, Exhibit US-3, p. 15.

[3777] E.g. United States' first written submission, paras. 1064-1080, 1138-1155.

> course, rationally support the inferences made, but inferences may be drawn whether or not the facts already on the record deserve the qualification of a *prima facie* case. The drawing of inferences is, in other words, an inherent and unavoidable aspect of a panel's basic task of finding and characterizing the facts making up a dispute."[3778]

7.1821 The other option potentially open to us is to decline to make a serious prejudice finding because of the difficulty of calculating with mathematical certitude the precise degree to which Boeing's pricing of the 737NG and 777 families of aircraft was affected by the FSC/ETI subsidies and B&O tax subsidies. In our view, such an approach would be inconsistent with our obligations under Article 11 of the DSU, as well as contrary to considerations of basic commonsense and reason.

7.1822 The Panel considers that it is reasonable to infer, based on the fact that the effects of the subsidies on Airbus' prices would be most acutely felt in particular sales campaigns of strategic importance to Boeing and/or Airbus, that the effects of the subsidies are therefore significant in the sense that Boeing's success in such sales campaigns necessarily constitutes a significant lost sale to Airbus, and that such sales secured by Airbus in the face of Boeing's reduced prices necessarily constitute sales secured at significantly suppressed prices. It is thus inescapable to also arrive at the conclusion that in law the effects of the subsidies on Airbus' prices and sales constitute significant lost sales and significant price suppression, within the meaning of Article 6.3(c) of the SCM Agreement, as well as displacement and impedance of exports from third country markets, within the meaning of Article 6.3(b).

7.1823 In sum, the Panel is satisfied that the effects of the FSC/ETI subsidies and the Washington State B&O tax subsidies in the 100 – 200 seat single aisle LCA product market were to significantly suppress Airbus' prices in sales in which it competed against Boeing and to cause Airbus to lose significant sales, and to displace and impede European Communities' exports from third country markets in that product market. We are also satisfied that the effects of the FSC/ETI subsidies, the Washington State B&O tax subsidies and the City of Everett B&O tax subsidies in the 300 – 400 seat wide-body LCA product market were to significantly suppress Airbus' prices in sales in which it competed against Boeing and to cause Airbus to lose significant sales, and to displace and impede European Communities' exports from third country markets in that product market.

7.1824 We note that the B&O tax subsidies also apply to the production and sale of the 787. However, there is insufficient evidence before us that would enable us to conclude that these subsidies are of a magnitude that would enable them, on their own, to have such an effect on Boeing's prices of the 787 as would lead to a finding that their effects in the 200 – 300 seat wide-body market were significant price suppression, significant lost sales or displacement or impedance of European Communities imports into the United States or exports to third countries. We recall that we have previously found that the aeronautics R&D subsidies, through their effects on Boeing's development of technologies for the 787, gave rise to serious prejudice in that product market.[3779] However, owing to the very different way in which the aeronautics R&D subsidies operate, we do not consider that it is appropriate to aggregate the effects of the B&O tax subsidies on Boeing's pricing of the 787 with the effects of the aeronautics R&D subsidies on Boeing's development of technologies applied to the 787, as it is clear that the two groups of subsidies operate through entirely distinct causal mechanisms.

Effects on Boeing's pricing of subsidies alleged to increase Boeing's non-operating cash flow

7.1825 We now turn to consider the effects of the category of subsidies identified by the European Communities as operating to increase Boeing's non-operating cash flow, thereby allegedly giving Boeing the ability to engage in "aggressive pricing" of its LCA in order to win market share from

[3778] Appellate Body Report, *Canada – Aircraft*, para. 198.
[3779] See para. 7.1797 of this Report.

BCI deleted, as indicated **[***]**

Airbus. First, the Panel recalls that this group of subsidies comprises all of the challenged measures that the Panel has found to be specific subsidies within the meaning of Articles 1 and 2 of the SCM Agreement, other than the FSC/ETI subsidies and B&O tax subsidies discussed above. In other words, the European Communities purports to include within this category of subsidies the aeronautics R&D subsidies, the Washington State and City of Everett taxation subsidies other than the B&O tax subsidies, the property and sales tax abatements provided to Boeing pursuant to IRBs issued by the State of Kansas and municipalities therein, and the tax credits and other incentives provided to Boeing by the State of Illinois and municipalities therein, each as set forth in paragraph 7.1433 of this Report. The aeronautics R&D subsidies represent the overwhelming majority of the subsidy amount within this category of subsidies received by Boeing between 1989 and 2006.

7.1826 The Panel recalls that it has previously found that the aeronautics R&D subsidies, through their effects on Boeing's development of technologies for the 787, caused serious prejudice to the European Communities in the 200 – 300 seat wide-body LCA product market.[3780] The European Communities' "price effects" causation argument effectively asks the Panel to analyze the effects of the aeronautics R&D subsidies again, this time on the basis that they freed up additional cash which Boeing was able to use to engage in aggressive pricing of its three families of LCA (i.e. the 737NG, 777 and 787) resulting in serious prejudice to the European Communities' interests in the three LCA product markets. We have previously indicated that we do not consider that it is appropriate to reduce the effects of the aeronautics R&D subsidies at issue in this dispute to their cash value.[3781] Moreover, the European Communities has indicated, in response to a question from the Panel, that the Panel should not over-count the effects of the aeronautics R&D subsidies by analyzing their effects in terms of their "knowledge" effects as well as, or in addition to, their "financial" effects.[3782] Having analyzed the effects of the aeronautics R&D subsidies on the basis of their contribution to Boeing's development of technologies for the 787, we consider that it would be over-counting to additionally analyze their effects based on a different understanding of their operation, namely, as freeing up additional cash for Boeing to use to lower the prices of its LCA.

7.1827 When the aeronautics R&D subsidies are subtracted from this category of subsidies that are said to operate by increasing Boeing's non-operating cash flow, the amount remaining is comparatively small, being approximately $550 million. As importantly, the subsidies in this category, unlike the FSC/ETI subsidies and B&O tax subsidies discussed above, are not directly related to Boeing's production or sale of LCA.[3783] Rather, as the European Communities appears to acknowledge, these subsidies are not "explicitly targeted to lowering Boeing's costs of production of specific LCA models".[3784] According to the European Communities, "LCA market factors" and "dynamics of production" combine to support a finding that subsidies of this nature nonetheless allow Boeing to market its LCA at lower prices than would otherwise be the case. The European Communities argues that, under the "right conditions of competition – such as the intense duopoly

[3780] See para. 7.1797 of this Report.
[3781] See para. 7.1760 of this Report.
[3782] European Communities' response to question 375, para. 322.
[3783] European Communities' first written submission, para. 1277; European Communities' second written submission, paras. 697-740. Although the European Communities argues that some of the subsidies within this category "specifically relate to the development and production of the 787 family of LCA" and are therefore "tied" to the 787, it uses this concept to denote the allocation of a subsidy amount to particular products, rather than to denote that a subsidy is "tied" to a product in the sense that its receipt is in some way contingent on production or sale of a particular product; European Communities' response to question 374, paras. 297-298, footnote 392.
[3784] European Communities' first wrriten submission, para. 1303.

competition existing in the LCA markets – non-price- or non-production-contingent subsidies can confer the ability to cause adverse effects".[3785]

7.1828 Indeed, while the United States has emphasized that subsidies that are not tied to production of a particular product are unlikely to affect production, it has explicitly stated that it agrees with the European Communities that this fact is not determinative.[3786] Thus, it would appear that the parties do not disagree on the proposition that where a subsidy is not tied to production of a particular product, the subsidy may still affect the behaviour of the recipient of the subsidy in a manner that causes serious prejudice, depending upon the context in which it is used. However, an important element of the European Communities' arguments as to why subsidies of this nature would affect Boeing's pricing behaviour relates to the total amount of the subsidies that the European Communities alleges to exist, as well as their allocation over time and across the particular models of LCA to arrive subsidy "magnitudes". One might reasonably expect that a total amount of $19.1 billion in subsidies received between 1989 and 2006 would have a greater potential to affect Boeing's LCA prices than $550 million received over the same period. As we have explained, the Panel is assessing the effects on Boeing's LCA pricing of approximately $550 million in subsidies, the receipt of which is not directly tied to the production or sale of particular LCA. We are not persuaded that subsidies of this nature and of this amount have affected Boeing's prices in a manner that could be said to give rise to serious prejudice to the European Communities' interests.

Other causation arguments made by the European Communities

7.1829 The European Communities has also, in the context of its arguments that the subsidies caused serious prejudice through their effects on Boeing's LCA prices, presented certain arguments which the Panel does not find persuasive. In particular, the European Communities argues that Boeing's LCA division would not have been "economically viable" had it not received $19.1 billion in subsidies between 1989 and 2006. The European Communities also presents an econometric simulation model that purports to support the European Communities' argument that Boeing would have invested the subsidies in lower LCA pricing and additional investments in R&D. We briefly explain what we consider to be the principal weaknesses in these arguments.

"Economic viability" of Boeing's LCA division in the absence of the subsidies

7.1830 The European Communities' arguments concerning the "economic viability" of Boeing's LCA division between 1989 and 2006 had it not received an alleged $19.1 billion in subsidies initially arose out of its rebuttal of the United States' argument that the subsidies had no effect on Boeing's pricing or

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[3785] European Communities' non-confidential oral statement at the second meeting with the Panel, para. 107. See also, European Communities' response to question 379, para. 435: "certain tied subsidies may yield similar effects as certain unrestricted subsidies, depending on the context of the specific subsidy at issue; i.e., the specific nature of the subsidy and its magnitude, as well as the condition of the recipient."

[3786] United States' comments on European Communities' response to question 301, paras. 601-602:

"The United States also agrees with the EC that the absence of a direct link between subsidies and the development, production, or sale of large civil aircraft 'should not be determinative of the outcome of the Panel's causation analysis'. At the same time, without a direct link between an alleged subsidy and the development, production or sale of large civil aircraft, a complaining member bears the burden of identifying persuasive evidence that the subsidy was used by the recipient in a way that caused the adverse effects at issue, or that, but for' the subsidy, the recipient could not have competed in the market as it did.

Because the bulk of the alleged subsidies in this dispute are, by the EC's own admission, 'untied' to the development, production or sale of any Boeing large civil aircraft, the evidence cited by the EC regarding the ways in which Boeing supposedly used the alleged subsidies is critical to its causation arguments. Yet, that 'evidence' is essentially non-existent ..."

product development behaviour. With each successive submission, the parties presented new and more complex financial information concerning the appropriate basis on which to conduct a counterfactual analysis of whether the Boeing LCA division's pricing and product development behaviour would have been possible had it not received an alleged $19.1 billion in subsidies between 1989 and 2006.[3787]

7.1831 The parties disagree generally as to the appropriate metric for assessing the "economic viability" of Boeing's LCA division and the appropriate adjustments that should be made to the operating profit figures for Boeing's LCA division as part of that assessment. The Panel recalls that third parties such as Australia and Brazil question whether it is even appropriate for panels to undertake a causation analysis under Articles 5(c) and 6.3 of the SCM Agreement by attempting to trace subsidies through a recipient's cash flow statements. It is not necessary for the Panel to address these issues in order to evaluate the merits of the European Communities' economic viability argument for purposes of this dispute. We recall that all of the economic viability calculations are based on the assumption that Boeing's LCA division received $19.1 billion in subsidies between 1989 and 2006. By contrast, the Panel has found that the amount of subsidies received by Boeing over this period is substantially less than $19.1 billion. Even if the Panel were to accept the adjustments to the operating profit figures for Boeing's LCA division proposed by the European Communities, and even if the Panel were to consider it appropriate to analyze the effects of the aeronautics R&D subsidies on Boeing's behaviour as being equivalent to the effects on Boeing of the receipt of an equivalent amount of unrestricted cash (which we do not), once the amount of the subsidies received by Boeing between 1989 and 2006 is reduced from $19.1 billion to our own estimate of the total amount of the subsidies[3788], the argument that Boeing's LCA division would not have been "economically viable" in the absence of the subsidies unless it altered its prices or product development behaviour becomes untenable, whichever basis for assessing economic viability is used.

Cabral Report

7.1832 The European Communities presents an econometric simulation model by Professor Luís Cabral which seeks to address the question of how the provision of subsidies affects the business decisions of Boeing; specifically, how the receipt of an additional dollar of a particular category of subsidy affects the amount that Boeing chooses to invest in the development of new aircraft, and to

[3787] ITR, Alternative Assessment of the Effect of US Subsidies on the US LCA Industry's Profit and Debt, Exhibit EC-1180; United States' Comments on European Communities' response to question 78, para. 270; European Communities' non-confidential oral statement at the second meeting with the Panel, para. 117; ITR, Economic Viability of Boeing Commercial Airplanes without US Subsidies, 10 April 2008, Exhibit EC-1393, Robert F. Whitelaw, Report on Measuring Economic Viability, 3 April 2008, Exhibit EC-1395 and European Communities' response to question 292; Statement of Ruud Roggekamp, Exhibit US-1321; Greenwald Comments on Whitelaw Economic Viability Report, Exhibit US-1324 and United States' comments on European Communities' response to question 292; Professor David Wessels, The Economic Viability of Boeing's Commercial Aircraft Division (30 July 2009), Exhibit US-1358; Stern Stewart & Co. Comments on Economic Viability Analysis (29 July 2009), Exhibit US-1359 and United States' response to question 370; ITR Report on Reconciliation of EC, Wessels and Stern Analyses of BCA's Economic Viability, 20 August 2009, Exhibit EC-1448; Whitelaw Declaration on Effects of Removal of Cash on WACC and Earnings for Economic Viability Analysis, Exhibit EC-1499; Zarowin Declaration on Treatment of Certain Pension and Other Post-Retirement Obligations, 20 August 2009, Exhibit EC-1450 and European Communities' comments on United States' response to question 370; ITR Report on BCA's Return on Invested Capital, 29 July 2009, Exhibit EC-1429; Declaration of Paul Zarowin, 29 July 2009, Exhibit EC-1431 and European Communities' response to question 378, para. 357; United States' comments on European Communities' response to question 378, and Commentary on ITR's ROIC analysis and the Wessels Economic Viability Reports (Annex A) and Commentary on ITR's ROIC analysis and the Stern Stewart Economic Viability Report (Annex B).

[3788] See para. 7.1433 of this Report.

price more aggressively.[3789] Professor Cabral's analysis focuses on the effects of a category of subsidies that he refers to as "development subsidies". These are subsidies in which the amount of subsidy does not vary in direct proportion to the number of aircraft produced or sold.[3790] Professor Cabral's analysis is based on a specific economic model of Boeing's behaviour; namely, that when Boeing receives so-called "development subsidies", management seeks to maximize a trade-off between shareholder income and shareholder value, with the result that it directs a certain portion of the subsidy towards dividends, and the remainder towards "investments that increase firm value".[3791] Appendix VII.F.2 to this Part of the Report explains the Cabral model in greater detail, along with the United States' criticisms of the model, and the Panel's evaluation of its principal weaknesses in the context of its use in this dispute.

Conclusion

7.1833 For the foregoing reasons, the Panel concludes: (i) that the effect of the FSC/ETI subsidies and State of Washington B&O tax subsidies is displacement and impedance of European Communities, exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement with respect to the 100 – 200 seat single-aisle LCA product market, and significant price suppression and significant lost sales within the meaning of Article 6.3(c) in that product market; and (ii) that the effect of the FSC/ETI subsidies, the State of Washington B&O tax subsidies and the City of Everett B&O tax subsidies is displacement and impedance of European Communities' exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement with respect to the 300 – 400 seat wide-body LCA product market, and significant price suppression and significant lost sales within the meaning of Article 6.3(c) in that product market.

7.1834 The Panel is not satisfied that the European Communities has demonstrated that the Washington State taxation subsidies other than the B&O tax subsidies, or the property and sales tax abatements provided to Boeing pursuant to IRBs issued by the State of Kansas and municipalities therein, and the tax credits and other incentives provided to Boeing by the State of Illinois and municipalities therein, through their effects on Boeing's LCA pricing behaviour, cause serious prejudice to the European Communities' interests in any of the three LCA product markets identified by the European Communities in this dispute.

Whether the subsidies at issue in this dispute cause a threat of significant price suppression in each of the three LCA product markets

7.1835 In addition to its arguments that the subsidies cause "present" serious prejudice to the European Communities' interests, the European Communities argues that the subsidies at issue in this dispute cause a threat of serious prejudice with respect to *future orders* of LCA in each of the three LCA product markets.[3792]

[3789] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 1.

[3790] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 2-3. It appears that the category of subsidies that Professor Cabral refers to as "development subsidies" encompasses the same subsidies that the European Communities analyzes as operating to increase Boeing's non-operating cash flows (as distinguished from the subsidies that the European Communities characterizes as reducing Boeing's marginal unit costs of production and sale of LCA).

[3791] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 5.

[3792] Specifically, the European Communities argues that the subsidies cause a threat of significant price suppression with respect to *future orders* of: the A330 and A350XWB-800 families of LCA, A320 family of LCA and A350XWB-900/1000 families of LCA; European Communities' first written submission, paras. 1446, 1542 and 1632.

BCI deleted, as indicated **[***]**

Arguments of the European Communities

7.1836 The European Communities' arguments regarding the existencee of a threat of serious prejudice based on future orders of Airubs LCA are structured in the same manner with respect to each LCA product market. The European Communities argues that the present and future subsidies give rise to a significant likelihood that Airbus will suffer from significant price suppression with respect to future orders of each of the competing Airbus LCA families, based on the "same types of evidence" that support the European Communities' present serious prejudice claim.[3793] In this regard, the European Communities contends: (i) Boeing will receive "guaranteed subsidies" benefiting each of its Boeing LCA families in the post-2006 period; (ii) the nature of the subsidies indicates that the "technology effects" (relevant only in relation to the 200 – 300 seat wide-body LCA product market) and "price effects" (relevant with respect to each of the three LCA product markets) will continue in the future; (iii) the magnitude of the past, present and "guaranteed future subsidies" benefiting each of the Boeing LCA families will continue to be very large[3794]; (iv) conditions of competition in the post-2006 period will continue to give Boeing the ability and incentive to use the "subsidy benefits" to "price down" its subsidized LCA families to the detriment of the like Airbus LCA families[3795]; and (v) the already suppressed prices in each of the three Airbus LCA markets at issue, coupled with the nature and magnitude of the subsides, estimated price effects of the subsidies and conditions of competition in each of the three LCA markets give rise to a significant likelihood that Airbus' future orders of "like" LCA products will be at significantly suppressed prices.[3796]

7.1837 According to the European Communities, the suppressed prices for Airbus' LCA (which are caused by subsidies) provide a strong indication that prices will be suppressed in the future. The European Communities considers that the evidence provided in support of its present price suppression arguments is "equally relevant" to its threat of price suppression arguments insofar as it shows already suppressed prices for the Airbus LCA at issue.[3797] Further, the European Communities argues that "having established the existence of serious prejudice from the actionable subsidies, demonstrating the existence of *threat* of serious prejudice from the effects of the same subsidies is a relatively straight-forward exercise".[3798]

7.1838 In response to a question from the Panel, the European Communities indicates that it does not agree with the implication that its threat of serious prejudice argument is dependent on it demonstrating the existence of present serious prejudice. The European Communities states that although the evidence relied upon in support of its present and threat of serious prejudice arguments may overlap, the evidence is "being adduced to support different legal conclusions".[3799] Further, in response to a United States' argument, the European Communities contends that its threat of serious prejudice arguments with respect to future LCA orders are not based merely on "the existence of present serious prejudice, and the continuation of that serious prejudice into the future".[3800]

[3793] European Communities' first written submission, paras. 1447, 1542 and 1632.
[3794] European Communities' first written submission, paras. 1450, 1545 and 1635. The European Communities here presents projections of what it claims are per-LCA subsidization magnitudes and *ad valorem* rates for each model of the 787, 737NG and 777 for the years 2007-2010; Figures 36, 37, 53, 54, 69 and 70 of European Communities' first written submission, paras. 1450, 1545 and 1635.
[3795] European Communities' first written submission, para.s 1451, 1546 and 1636.
[3796] European Communities' first written submission, paras. 1452-1454, 1547-1549 and 1637-1639.
[3797] European Communities' first written submission, paras. 1453, 1548 and 1638.
[3798] European Communities' first written submission, para. 1148.
[3799] European Communities' response to question 103, para. 544.
[3800] European Communities' comments on United States' response to question 105, para. 414.

BCI deleted, as indicated **[***]**

Arguments of the United States

7.1839 The United States argues that the European Communities' threat of serious prejudice arguments rest almost exclusively on the notion that the "technology effects" and the "price effects" alleged in relation to its present serious prejudice claim will "continue".[3801] By asserting that the evidence presented in relation to present serious prejudice demonstrates a threat of serious prejudice on the basis of unsupported assertions that the current situation will "continue" in the future, the European Communities' threat of serious prejudice case does nothing more than repeat the erroneous assertions it made in relation to its present serious prejudice case. The United States argues that the alleged subsidization did not cause present serious prejudice. Therefore, in the absence of any new information from the European Communities, continuation of the existing situation is "likely to lead to more of the same".[3802] In other words, if the Panel does not find the existence of present serious prejudice, the European Communities has provided no basis for finding a threat of serious prejudice.[3803] Further, the United States argues that the European Communities has provided no evidence to support its assertion that the current situation is likely to "continue". According to the United States, the situation for Airbus is in fact likely to improve.[3804]

7.1840 In response to the European Communities' argument that the conditions of competition will continue to give Boeing the ability and incentive to use its subsidy benefits to price down its LCA, the United States argues that it has demonstrated in response to the present serious prejudice case that Boeing does not have such an incentive. Further, it asserts that the conditions of competition are evolving in Airbus' favour.[3805] According to the United States, the European Communities' reliance upon the magnitude of the subsidies does not advance its threat of serious prejudice case because the European Communities has grossly overstated the magnitude and price effect figures, both on an absolute and a per-aircraft basis.[3806]

7.1841 The United States also argues that if the Panel finds the existence of present serious prejudice, this warrants the exercise of judicial economy in relation to the European Communities' arguments regarding threat of serious prejudice.[3807] This is because a finding of present serious prejudice triggers the obligation under Article 7.8 of the SCM Agreement for the United States to remove the adverse effects of the subsidy or to withdraw the subsidy. The United States argues that in such circumstances, an additional finding of threat of serious prejudice "will not change the obligation on the subsidizing Member or the recommendation of the Panel".[3808]

Arguments of third parties

Australia

7.1842 Australia argues that a threat of serious prejudice does not constitute a distinct *form* of serious prejudice. According to Australia, footnote 13 to the SCM Agreement makes clear that, whatever the overall scope of serious prejudice may be, that scope includes the concept of threat of serious

[3801] United States' first written submission, paras. 1014, 1103 and 1183.
[3802] United States' first written submission, paras. 1009-1010, 1098-1099 and 1178-1179.
[3803] This is because the European Communities' threat claim is premised on the existence of present serious prejudice and the continuation of that serious prejudice into the future. United States' response to question 313, para. 560.
[3804] United States' first written submission, paras. 1011, 1100 and 1180.
[3805] United States' first written submission, para. 1015.
[3806] United States' first written submission, paras. 1016, 1104 and 1184.
[3807] United States' response to question 313, para. 559.
[3808] United States' response to question 313, para. 559. The United States contends that its approach is consistent with the reasoning of the Appellate Body in *US – Upland Cotton (Article 21.5 – Brazil)*, para. 244.

prejudice within its bounds.[3809] Australia argues that both threat of serious prejudice and the broader concept of serious prejudice can be seen to exist on the same continuum and are defined by the same effects listed in Article 6.3, as elaborated by the rest of Article 6.[3810]

7.1843 Australia considers that the report of the panel in *US - Upland Cotton* suggests that the threat of serious prejudice can be established by an examination of the likely existence of serious prejudice at some future point in time.[3811] Australia argues that current effects of the subsidies are therefore relevant because, in the absence of a significant change in circumstances, they will indicate the likelihood that the subsidies would continue to cause serious prejudice in the future. Consequently, according to Australia, the same facts may be relevant in establishing both present serious prejudice and threatened serious prejudice.[3812]

7.1844 Australia notes that, although "material injury" is a distinct concept from "serious prejudice" and that the factors to be considered in each determination are set out in Article 15 and Article 6.3 respectively, the Appellate Body has observed that, while provisions that relate to a determination of "injury" rather than "serious prejudice" must not automatically be transposed into Part III of the SCM Agreement, they may nevertheless be relevant.[3813] Australia considers that an examination of whether there is a "change in circumstances" which is "clearly foreseen and imminent" would be relevant to the assessment of a "threat of serious prejudice". However, in Australia's view there is nothing in the Agreement that would *require* that "threat of serious prejudice" must arise from a "change in circumstances" which is "clearly foreseen and imminent".[3814]

Brazil

7.1845 Brazil notes that the term "threat of serious prejudice" is not defined under the SCM Agreement and submits that the Panel may rely upon the "threat of material injury" standard in Article 15.7 broadly to inform its interpretation of "threat of serious prejudice" under footnote 13. Brazil cautions, however, that the Panel should not transpose the standard from Article 15.7 into a standard that is also required to demonstrate "threat of serious prejudice".[3815] Brazil considers that "threat of serious prejudice" within the meaning of footnote 13 arises where the provision of the challenged subsidies is inevitable within the near future on account of the fact that they are already committed (e.g. scheduled), where there are no limits to the recipient's future production and exports of the subsidized good, and where there is evidence that the challenged subsidies have already caused present serious prejudice. In such circumstances, it is reasonable to infer that there will be continuing subsidies, continuing subsidized exports, and continuing serious prejudice.[3816]

7.1846 Brazil considers that imposing a requirement to demonstrate a "change in circumstances" in order to establish a threat of serious prejudice would substantially increase the burden of proof for complainants in serious prejudice disputes in a manner not contemplated by the text of the SCM Agreement. However, should the Panel conclude that "threat of serious prejudice" should depend upon a "change in circumstances", an analysis of aircraft orders, for example, could be used to

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[3809] Australia's response to questions, 5 December 2007.
[3810] Australia's response to questions, 5 December 2007.
[3811] Australia's written submission, para. 67, referring to Panel Report, *US – Upland Cotton*, para. 7.1496.
[3812] Australia's written submission, para. 68.
[3813] Australia's response to question 19, 14 April 2008, referring to Appellate Body Report, *US – Upland Cotton*, para. 438**.**
[3814] Australia's response to question 19, 14 April 2008.
[3815] Brazil's response to question 19, 14 April 2008, para. 27. According to Brazil, if this had been the intention of the drafters, they would have defined "threat of serious prejudice" by cross-referencing Article 15.7 in footnote 13 or vice versa.
[3816] Brazil's response to question 19, 14 April 2008, para. 28.

demonstrate a threat of serious prejudice. The fact that these orders are likely to result in actual deliveries would be sufficient under the circumstances to constitute a change in circumstances that is clearly foreseen and imminent.[3817]

China

7.1847 China notes that the relevant provisions of the SCM Agreement are silent on the determination of threat of serious prejudice. It submits that, given the structure of Article 5 and the general framework of the SCM Agreement, Articles 15.7 and 15.8 of the SCM Agreement on the determination of threat of injury provide important guidance. China notes that Article 5 includes both injury and serious prejudice as two parallel adverse effects and submits that, through cross-reference to Part V, footnote 11 to Article 5 clarifies that the concept of "injury" used in Article 5 includes threat of material injury. China argues that footnote 13 to Article 5 stipulates that threat of serious prejudice constitutes "serious prejudice to the interests of another Member".[3818]

7.1848 China submits that the threat of serious prejudice must be clearly foreseen and imminent, and that a finding of such threat must be based on facts and made with special care. [3819]

Japan

7.1849 Japan argues that, although the SCM Agreement does not provide a specific standard for determining "threat" of serious prejudice, the chapeau of Article 15.7 of the SCM Agreement serves as a reference for such a determination. Japan notes that the first sentence of Article 15.7 provides that a determination of "threat ... shall be based on facts and not merely on allegation, conjecture or remote possibility" and that the second sentence of Article 15.7 provides that "threat" arises from a "change in circumstances" which is "clearly foreseen and imminent". Japan argues that not all events that constitute a "change in circumstances" cause "threat" of serious prejudice. According to Japan, the sentence provides that the change of circumstances whose imminency is demonstrated by objective evidence is appropriate for the assessment of the threat of serious prejudice. [3820]

Conclusion with respect to the European Communities' threat of serious prejudice arguments

7.1850 The Panel notes that the European Communities' arguments concerning the existence of a threat of serious prejudice based on *future orders* of Airbus LCA are made only with respect to threat of *price suppression* within the meaning of Article 6.3(c) and not any other form of serious prejudice.[3821] Its central arguments in support of the existence of a threat of price suppression are that:

(a) the "price effects" and, in the case of the market in which the 787 competes, the "technology effects" of the subsidies *will continue in the future*[3822];

(b) the magnitude of the past, present and guaranteed future subsidies benefiting Boeing LCA *will continue to be very large*[3823];

[3817] Brazil's response to question 19, 14 April 2008, para. 29.
[3818] China's oral statement, para. 9. See also, China's written submission, paras. 35-47.
[3819] China's oral statement, paras. 9-14.
[3820] Japan's response to question 19, 14 April 2008.
[3821] European Communities' first written submission, paras. 1446, 1541 and 1631.
[3822] European Communities' first written submission, paras. 1449, 1544 and 1634. Emphasis added.
[3823] European Communities' first written submission, paras. 1450, 1545 and 1635. Emphasis added.

(c) conditions of competition similar to those that existed in 2004-2006 *will continue to give Boeing the ability and incentive* to use its subsidy benefits to price down its LCA[3824]; and

(d) the *already suppressed prices* for Airbus LCA caused by the subsidies to Boeing provide a strong indication that the *prices will continue to be suppressed* as a result of the United States subsidies.[3825]

7.1851 The Panel recalls its conclusions that the effects of certain of the subsidies is significant price suppression in each of the three LCA product markets.[3826] The European Communities' threat of serious prejudice arguments are based on the continuation into the future of the subsidization and market conditions which the Panel has already found to cause present serious prejudice in the form of significant price suppression. The result of our finding of serious prejudice within the meaning of Articles 5(c) and 6.3 of the SCM Agreement, based on the existence of significant price suppression within the meaning of Article 6.3(c), is that the United States is obligated to take appropriate steps to remove the adverse effects or withdraw the subsidy.[3827] This means that the serious prejudice, or the continuation of the subsidization in the manner which we have found to cause present serious prejudice to the European Communities' interests, will no longer occur, thereby removing the basis for the European Communities' arguments concerning threat of serious prejudice with respect to future orders of Airbus LCA. The Panel considers that in these circumstances, it is appropriate to exercise judicial economy with respect to this aspect of the European Communities' serious prejudice claim.

7.1852 The Panel recalls that its exercise of judicial economy in this manner is consistent with the panel's decision in *US – Upland Cotton* in which the panel held:[3828]

> "{U}pon required implementation by the United States of this Panel's prohibited subsidy findings and present serious prejudice findings, the basket of measures in question may be so significantly transformed or manifestly different from the measures that are currently in question that it is not necessary to address Brazil's claims of threat of serious prejudice".

7.1853 We also note the Appellate Body's statement in *US – Upland Cotton (Article 21.5 – Brazil)* that "a claim of present serious prejudice relates to the existence of prejudice in the past, and present, and that may continue in the future".[3829] This also supports the notion that the continuation of serious prejudice into the future is caught by the obligation under Article 7.8 of the SCM Agreement, which requires removal of the present serious prejudice which we have found to exist, including that which exists into the future.

(d) Conclusion

7.1854 **In conclusion, the Panel finds:**

(a) that the effect of the aeronautics R&D subsidies is a threat of displacement and impedance of European Communities exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement with respect to the 200-300 seat wide-body LCA product market and significant price suppression

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[3824] European Communities' first written submission, paras. 1451, 1546 and 1636. Emphasis added.
[3825] European Communities' first written submission, paras. 1453, 1548 and 1638. Emphasis added.
[3826] See paras. 7.1797 and 7.1833 of this Report.
[3827] See Article 7.8 of the SCM Agreement.
[3828] Panel Report, *US – Upland Cotton*, para. 7.1503.
[3829] Appellate Body Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 244.

and significant lost sales, within the meaning of Article 6.3(c) of the SCM Agreement, in that product market, each of which constitutes serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement.

(b) that the effect of the FSC/ETI subsidies and the State of Washington B&O tax subsidies is displacement and impedance of European Communities' exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement with respect to the 100 – 200 seat single-aisle LCA product market and significant price suppression and significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement in that product market, each of which constitutes serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement;

(c) that the effect of the FSC/ETI subsidies and the State of Washington and the City of Everett B&O tax subsidies is displacement and impedance of European Communities exports from third country markets within the meaning of Article 6.3(b) of the SCM Agreement with respect to the 300-400 seat wide-body LCA product market, and significant price suppression and significant lost sales within the meaning of Article 6.3(c) of the SCM Agreement in that product market, each of which constitutes serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement.

7.1855 **The Panel is not satisfied that the European Communities has demonstrated that the Washington State and City of Everett taxation subsidies other than the B&O tax subsidies, or the property and sales tax abatements provided to Boeing pursuant to IRBs issued by the State of Kansas and municipalities therein, and the tax credits and other incentives provided to Boeing by the State of Illinois and municipalities therein, each as set forth in paragraph 7.1433 of this Report, through their effects on Boeing's LCA pricing behaviour, cause serious prejudice to the European Communities' interests in any of the three LCA product markets identified by the European Communities in this dispute.**

3. The European Communities' claim that violation of the 1992 Agreement constitutes serious prejudice to the European Communities' interests within the meaning of Article 5(c) of the SCM Agreement

7.1856 In this section of the Report, the Panel considers the European Communities' claim that the United States causes serious prejudice to the European Communities' interests by violating agreed obligations concerning support to the LCA sector that are set forth in the 1992 Agreement.[3830]

(a) Arguments of the parties and third parties

(i) European Communities

7.1857 The European Communities claims that "violation by the United States of the {1992 Agreement} constitutes serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement."[3831] On the basis of Article 5(c), which refers to serious prejudice "to the interests of *another* Member", the European Communities contends that

[3830] European Communities' first written submission, para. 1016.
[3831] European Communities' first written submission, para. 1016.

"{t}he analysis is necessarily bilateral".[3832] The European Communities argues that, "{a}s the United States has breached the terms of that agreement by giving indirect support exceeding the agreed levels, along with prohibited production support, it has violated the rights of the European Communities and this violation must be considered to constitute serious prejudice".[3833]

7.1858 The European Communities explains that the first international agreement related to the LCA sector to which the European Communities and the United States were parties was the Tokyo Round Agreement on Trade in Civil Aircraft (the "1979 Agreement"), which was followed by the bilateral 1992 Agreement.[3834] Both the SCM Agreement and the recast 1979 Agreement entered into force in 1995, as annexed agreements to the WTO Agreement and the 1992 Agreement remained in force between the same parties following the entry into force of the SCM Agreement (together with the recast 1979 Agreement). The European Communities submits that, by regulating the application of the 1979 Agreement, the 1992 Agreement also bound the parties as regards measures concerning LCA potentially falling under the SCM Agreement.[3835]

7.1859 The European Communities notes that in the first recital to the 1992 Agreement, the parties recognized the need to "reduce trade tensions in the area" of large civil aircraft, while in the second recital, they further agreed that the disciplines in the 1979 Agreement shall "be strengthened with a view to progressively reducing the role of government support". Moreover, the parties agreed to detailed disciplines on support "in pursuit of their common goal of preventing trade distortions resulting from direct or indirect government support for the development and production of large civil aircraft."[3836] The European Communities argues that the 1992 Agreement set forth a detailed set of disciplines regarding the use of "indirect support". In particular, each party committed to ensure that indirect support does not confer unfair advantage on LCA manufacturers or lead to distortions in international trade in LCA and agreed that identifiable benefits to the development or production of any LCA derived from indirect support could not exceed, on an annual basis and net of recoupment: (i) three per cent of the commercial turnover of the civil aircraft industry of the Party concerned, or (ii) four per cent of the annual commercial turnover of any one firm in the Party concerned.[3837]

7.1860 The European Communities asserts that regular consultations under the 1992 Agreement took place between it and the United States between 1993-2004, and that many of the issues discussed in the dispute before this Panel were dealt with in these consultations.[3838] As regards "indirect support" under Article 5 of the 1992 Agreement, the European Communities contends that it made repeated inquiries vis-à-vis the United States, and in particular that it complained about government-funded aeronautical R&D as conferring unfair advantage, distorting trade and providing "identifiable benefits" in violation of the terms of the 1992 Agreement.[3839] The European Communities states that the prohibition of "production support" under Article 3 of the 1992 Agreement played a less prominent role in the consultations. According to the European Communities, after the adoption of the Boeing Incentive Package by Washington State, it could not raise the issue of its compatibility with the 1992 Agreement in formal consultations because none were held that year. The European Communities refers to several high-level communications, from European Community Commissioners for Trade to their U.S. counterparts, regarding the United States' compliance with Articles 3 and 5 of the 1992 Agreement.[3840] The European Communities recalls that the United States

[3832] European Communities' first written submission, para. 1017.
[3833] European Communities' first written submission, para. 1019.
[3834] European Communities' first written submission, paras. 1020 – 1022.
[3835] European Communities' first written submission, para. 1023.
[3836] European Communities' first written submission, para. 1024. 1992 Agreement, Fourth Recital.
[3837] European Communities' first written submission, para. 1025.
[3838] European Communities' first written submission, para. 1026.
[3839] European Communities' first written submission, paras. 1027 -1028.
[3840] European Communities' first written submission, paras. 1028, 1030.

notified it that it was abrogating the 1992 Agreement on 6 October 2004, on the pretext that the European Communities had breached its obligations on direct support under Article 3.[3841] The European Communities indicates that it did not accept this abrogation and considered the 1992 Agreement to remain in force.[3842]

7.1861 The European Communities alleges that there are "many instances" in which the United States did not comply with the 1992 Agreement.[3843] First, the United States violated Article 5.1 of the 1992 Agreement by failing to take necessary action to ensure that indirect government support did not confer unfair advantage upon LCA manufacturers benefiting from such support and did not take action to prevent such support from leading to distortion in international trade in LCA.[3844] Second, the annual indirect support provided by the U.S. Government, including R&D-related subsidies, exceeded the three per cent threshold set forth in Article 5.2 (a) of the 1992 Agreement.[3845] Third, the subsidies granted by the States of Washington, Kansas and Illinois, as well as the municipalities therein, are inconsistent with Article 3 of the 1992 Agreement, as they conferred benefits on Boeing that reduced its costs, either by foregoing of revenue otherwise due or by taking over costs that would otherwise be funded by Boeing.[3846] The European Communities alleges that because these measures are not covered by the specific provisions on development support contained in Article 4 of the 1992 Agreement, or indirect support contained in Article 5 of the 1992 Agreement, Article 3 of the 1992 Agreement covers such other production support.[3847]

7.1862 The European Communities argues that the "non-compliance of US subsidies with Articles 3 and 5 of the 1992 Agreement is relevant for the adverse effects analysis in this dispute because of the link between the 1992 Agreement and the GATT/WTO."[3848] The European Communities recalls that the 1979 Agreement was included in the list of covered agreements under Annex IV to the WTO Agreement and submits that footnotes 15, 16 and 24 in the SCM Agreement emphasize the special features of the LCA sector for certain issues under that agreement. The European Communities also recalls that the parties maintained the 1992 Agreement in its original form after the entry into force of the SCM Agreement, and asserts that both sides considered the 1992 Agreement of continuing relevance and continued to organize the bilateral consultations foreseen under the Agreement to discuss the measures covered by it.[3849]

7.1863 The European Communities contends that the 1992 Agreement constitutes "context for the interpretation of the SCM Agreement in this dispute", on the basis that the 1992 Agreement is a "relevant rule of international law", within the meaning of Article 31(3)(c) of the Vienna Convention on the Law of Treaties (Vienna Convention), to be taken into account when interpreting the SCM Agreement in a dispute between the United States and the European Communities.[3850] The European Communities makes two arguments in support of this contention. First, that "rules of international law" in the sense of Article 31(3)(c) of the Vienna Convention may stem from all accepted sources of international law, including other treaty law. In this connection, the European Communities submits that "the 1992 Agreement is a treaty containing legal commitments and concluded in due form between the US and the EC under international law", and further states that "Article 4 {of the 1992

[3841] European Communities' first written submission, para. 1031; Note verbale No. 55 of the US mission to the EU to the General Secretariat of the Council of the EU, 6 October 2004, Exhibit EC-644.
[3842] European Communities' first written submission, para. 1031; Note verbale of the European Commission to US note verbale No. 55 of 6 October 2004, Exhibit EC-645.
[3843] European Communities' first written submission, para. 1032.
[3844] European Communities' first written submission, para. 1033.
[3845] European Communities' first written submission, para. 1034.
[3846] European Communities' first written submission, para. 1035.
[3847] European Communities' first written submission, para. 1035.
[3848] European Communities' first written submission, para. 1037.
[3849] European Communities' first written submission, para. 1040.
[3850] European Communities' first written submission, para. 1041.

Agreement} had *expressis verbis* established a dynamic link to the GATT/WTO legal order."[3851] Second, that, contrary to the view expressed by the panel in *EC – Approval and Marketing of Biotech Products*, the term "parties" in the text of Article 31(3)(c) of the Vienna Convention refers to the parties to the particular dispute only – and not the entire membership of the WTO.[3852] In support of that proposition, the European Communities refers to the Appellate Body reports in *EC-Poultry*, *EC – Computer Equipment*, *US – Shrimp*, and *United States – FSC (Article 21.5 - EC)*, the panel report in *US – Shrimp (Article 21.5 – Malaysia)*, the practice of other international bodies and tribunals, International Law Commission's 2006 Report of the Study Group on Fragmentation of International Law, contemporary authorities, the drafting history and ILC commentary to the draft of Article 31(3)(c) of the Vienna Convention, and the object and purpose of that provision.[3853]

7.1864 The European Communities submits that the 1992 Agreement is a "relevant rule of international law" to be taken into account when interpreting the SCM Agreement in a dispute between the United States and the European Community, and that "{i}t allows the Panel to have recourse to an additional source of law which reflects in great detail the precise legal positions of the Parties of the dispute with respect to the subject matter before it."[3854] As a consequence, the European Communities requests the Panel to find that "the US subsidies have caused adverse effects to its interests within the meaning of Article 5 of the SCM Agreement because the United States has breached the international obligations it owed to the European Communities under the 1992 Agreement."[3855] The European Communities submits that, "as can be drawn from the preamble and Article 5.1 of the 1992 Agreement, these obligations were specifically set to avoid distortions of international trade in large civil aircraft."[3856] The European Communities "therefore claims that by granting these subsidies, the United States violated its legal rights. This constitutes a particularly severe form of causing serious prejudice to the interests of the European Communities."[3857]

7.1865 The European Communities argues that the concept of "serious prejudice to the interests of another Member" in Article 5(c) of the SCM Agreement is correctly interpreted as covering forms of serious prejudice "not enumerated in Article 6.3".[3858] The European Communities considers that this correct interpretation of the SCM Agreement results from an analysis of the ordinary meaning, context, and object and purpose of the SCM Agreement. The European Communities argues that an examination of the ordinary meaning of the text of Articles 6.3 and 5(c) of the SCM Agreement does not reveal any statement that expressly limits the meaning of "serious prejudice" to the forms enumerated in Article 6.3.[3859] This is confirmed by the term "may" in Article 6.3, particularly when used as an auxiliary verb, as in Article 6.3.[3860] Several dictionary meanings of the term "may" all confirm that this term indicates a "possibility," or similar concept.[3861] The European Communities argues that the possibility in question is not that one of the instances enumerated in Article 6.3 is demonstrated, but that there is no serious prejudice.[3862] Thus, according to the European

[3851] European Communities' first written submission, para. 1044.
[3852] European Communities' first written submission, para. 1045.
[3853] European Communities' first written submission, paras. 1049 – 1053.
[3854] European Communities' first written submission, para. 1054.
[3855] European Communities' first written submission, para. 1055.
[3856] European Communities' first written submission, para. 1055.
[3857] European Communities' first written submission, para. 1055.
[3858] European Communities' response to question 61, para. 209.
[3859] European Communities' response to question 61, para. 211.
[3860] European Communities' response to question 61, para. 211.
[3861] European Communities' response to question 61, para. 211, referring to *Shorter Oxford English Dictionary*, fifth edition (2202), page 1725: "may: … {h}ave ability or power to … have the possibility, opportunity …" etc.
[3862] The European Communities explains that if it is demonstrated that the effect of the subsidy is (for example) to displace imports of a like product of another Member into the market of the subsidizing Member, then serious prejudice has been demonstrated; referring to Panel Report, *US – Upland Cotton*, at para. 7.1389:

Communities, the possibility introduced by the term "may" in Article 6.3 can only be the possibility that there are other forms of serious prejudice, in addition to those enumerated in Article 6.3.[3863]

7.1866 The European Communities argues that this view is also supported by context. First, footnote 13 to the SCM Agreement which, as an integral part of Article 5(c), is immediate context, states expressly that the term "serious prejudice" is used in the same sense as in paragraph 1 of Article XVI of the GATT 1994.[3864] Therefore, if something falls within paragraph 1 of Article XVI of the GATT 1994, it constitutes serious prejudice within the meaning of Article 5(c) of the SCM Agreement, even if it is not enumerated in Article 6.3.[3865] Second, the immediate context of footnote 13 further provides that serious prejudice includes threat of serious prejudice and that Article 6.3 at no point refers to threat of serious prejudice. This confirms that "serious prejudice" within the meaning of Article 5(c) includes threat of serious prejudice, even though this is not enumerated in Article 6.3.[3866] The European Communities argues that this confirms that Article 6.3 does not purport to exhaustively enumerate all possible forms of serious prejudice and that such an interpretation is consistent with the object and purpose of the SCM Agreement, which is to provide a remedy for all types of serious prejudice to the interests of another Member resulting from subsidies, within the meaning of Article 1 of the SCM Agreement.[3867]

7.1867 The European Communities argues that, although the 1992 Agreement does not expressly address the question of whether or not Article 6.3 of the SCM Agreement exhausts Article 5(c), it does expressly state that it is enacted in pursuit of the Parties' "common goal" or interest.[3868] In other words, the 1992 Agreement expressly sets out in detail what the interests of the United States and the European Communities are with respect to large civil aircraft, and the manner in which the Parties agree that those interests are to be preserved, particularly with respect to "the role of government support."[3869] Those interests and the means to preserve them reflect partially, but not entirely, the provisions of Article 6.3 of the SCM Agreement.[3870] Therefore, the very existence of the 1992 Agreement, as well as its overall content, strongly supports the view that the Parties agreed to a set of mutual "interests" in this area, which interests could, by definition, extend beyond those enumerated in Article 6.3, and could be "seriously prejudiced" within the meaning of Article 5(c) of the SCM Agreement.[3871]

(ii) United States

7.1868 The United States contends that the 1992 Agreement does not create legal obligations under the SCM Agreement. The United States submits that the European Communities cites no valid authority for the proposition that its *unilateral* determination that the United States violated the *bilateral* 1992 Agreement constitutes serious prejudice for purposes of the *multilateral* SCM

"We would therefore be permitted to find that serious prejudice has arisen upon fulfillment of the elements in one or more of the paragraphs of Article 6.3."

[3863] European Communities' response to question 61, para. 211.
[3864] European Communities' response to question 61, para. 212.
[3865] European Communities' response to question 61, para. 212.
[3866] European Communities' response to question 61, para. 212.
[3867] European Communities' response to question 61, para. 213.
[3868] European Communities' response to question 61, para. 215, referring to 1992 Agreement, Preamble, penultimate recital.
[3869] European Communities' response to question 61, para. 215.
[3870] European Communities' response to question 61, para. 215.
[3871] European Communities' response to question 61, para. 215.

Agreement, and that the European Communities' approach would require the Panel to disregard not only the text of the SCM Agreement but also the relevant articles of the DSU.[3872]

7.1869 The United States advances two arguments as to why the European Communities' claim with respect to the 1992 Agreement should fail. First, the 1992 Agreement is not a "covered agreement" for purposes of the DSU, and the Panel's terms of reference do not permit the Panel to examine a claim based on an alleged breach of that agreement. Second, while the European Communities' claim is based on a theory relating to the rule of treaty interpretation set out in Article 31(3)(c) of the Vienna Convention, what the European Communities really seeks to have the Panel do is apply the 1992 Agreement as substantive law rather than as a basis for interpreting the SCM Agreement.[3873]

7.1870 In relation to the first argument, the United States submits that the 1992 Agreement is not a covered agreement under Article 1.1 of the DSU, and that there is accordingly no basis for the Panel to examine the European Communities' claim. The DSU cannot be used to examine any question of compliance with the 1992 Agreement or the interpretation or application of the 1992 Agreement. In this connection, the United States refers to the Panel's terms of reference in this dispute, which are:

> "{T}o examine, in the light of the relevant provisions of the *covered agreement(s)* cited by the European Communities in document WT/DS353/2, the matter referred to the DSB by the European Communities in that document, and to make such findings as will assist the DSB in making the recommendations or in giving the rulings provided for in *that/those agreement(s)*."[3874]

7.1871 The United States submits that other provisions of the DSU that refer to the "covered agreements", including Article 11 ("the relevant covered agreements"), Article 3.2, ("the covered agreements"), Article 3.4 ("the covered agreements") and Article 19.1 ("a covered agreement") confirm that this claim is outside of the purview of this proceeding.[3875] The United States notes that the European Communities conceded in its request for establishment of a panel that the 1992 Agreement is not a covered agreement.[3876] Because the 1992 Agreement is not one of the covered agreements, there is no basis for the Panel even to reach the European Communities' claim with respect to the alleged breach of the 1992 Agreement.[3877]

7.1872 As regards the European Communities' contention that there is a "link" between the 1992 Agreement and the WTO Agreement because the Uruguay Round included the 1979 Agreement in the list of covered agreements under Annex IV to the WTO Agreement, the United States submits that the European Communities fails to explain the legal significance of a "link", that such a link would have no legal significance, and that in any event, contrary to the European Communities' assertions, the 1979 Agreement is not a "covered agreement" under the DSU.[3878] Appendix 1 to the DSU identifies the 1979 Agreement as a plurilateral agreement that could be subject to the DSU, but that such coverage was made "subject to the adoption of a decision by the parties . . . setting out the terms for the application of the {DSU} to the {1979 Agreement}." No such decision has been adopted; thus,

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[3872] United States' first written submission, para. 1191. The United States further notes that, in responding to the European Communities' arguments with respect to the 1992, Agreement, it does not endorse the European Communities' characterization of the 1992 Agreement or related events. The United States indicates that it does not address in detail the European Communities' characterization of the 1992 Agreement or related events because, in its view, the European Communities' argument is without merit. United States' first written submission, para. 1191, footnote 1436.

[3873] United States' first written submission, para. 1192.

[3874] WT/DS353/3. Footnote omitted.

[3875] United States' first written submission, para. 1194, footnote 1437.

[3876] United States' first written submission, para. 1194, footnote 1438.

[3877] United States' first written submission, para. 1194.

[3878] United States' first written submission, para. 1194, footnote 1439.

the European Communities' claim that the 1979 Agreement is a "covered agreement" within the meaning of Article 3.2 of the DSU is erroneous.

7.1873 As to the relevance of the 1992 Agreement to the interpretation of the SCM Agreement, the United States recalls at the outset that the European Communities sets forth a claim that the alleged breach of the 1992 Agreement constitutes serious prejudice under the SCM Agreement. In other words, in the European Communities' view, the 1992 Agreement contains substantive obligations relevant to settlement of this dispute; and by allegedly breaching those obligations, the United States has breached an obligation under the SCM Agreement.[3879] However, the European Communities presents its theory by contending that the 1992 Agreement "constitute{s} context for the interpretation of the SCM Agreement in this dispute", asserting that Article 31.3(c) of the Vienna Convention is the "legal rule" supporting this claim.[3880] The European Communities' theory is wholly without merit.

7.1874 The United States considers that the European Communities appears to conflate two arguments with respect to the 1992 Agreement. The European Communities first argues that the 1992 Agreement is a source of substantive law, such that a breach of the 1992 Agreement constitutes serious prejudice under the SCM Agreement.[3881] The European Communities then argues that Article 31(3)(c) of the Vienna Convention is the legal rule supporting the view that the 1992 Agreement constitutes "context" for the SCM Agreement. Even if the 1992 Agreement were context for the SCM Agreement, that contention is unrelated to the question whether the 1992 Agreement is a source of substantive law under the SCM Agreement. According to the United States, the European Communities presents these two contentions as if they are part of the same argument.[3882]

7.1875 The United States argues that, in attempting to bring the 1992 Agreement within the Panel's terms of reference, the European Communities is not alleging that the 1992 Agreement assists in interpreting the serious prejudice provisions of the SCM Agreement. Rather, the European Communities is alleging that a breach of the 1992 Agreement itself constitutes serious prejudice under the SCM Agreement.[3883] The European Communities would like the Panel to apply the 1992 Agreement as a matter of substantive law, and its reliance on the customary rule of interpretation reflected in Article 31(3)(c) of the Vienna Convention is misplaced and irrelevant to the Panel's examination of the European Communities' claim. As a result, the Panel need not consider the other flaws in the European Communities' citation to Article 31(3)(c), including the fact that not all WTO Members are parties to the 1992 Agreement, and that neither the United States nor the European Communities is any longer a party to the 1992 Agreement, since it is no longer in force. Moreover, the Panel need not consider whether the 1992 Agreement is "applicable" in the relations between "the parties", since it is no longer in force.[3884]

7.1876 The United States argues that an interpretation of the term "serious prejudice to the interests of another Member" in Article 5(c) of the SCM Agreement to cover forms of serious prejudice not enumerated in Article 6.3 would not be in accordance with customary rules of interpretation of public international law reflected in the Vienna Convention.[3885] The ordinary meaning of Article 5(c) and Article 6.3 of the SCM Agreement, the context, and the object and purpose of the SCM Agreement make clear that the list of effects enumerated in Article 6.3 is exhaustive and that effects not enumerated do not constitute "serious prejudice" under the SCM Agreement.[3886] The United States

[3879] United States' first written submission, para. 1195.
[3880] United States' first written submission, para. 1195.
[3881] United States' first written submission, para. 1195, footnote 1440.
[3882] United States' first written submission, para. 1195, footnote 1440.
[3883] United States' first written submission, para. 1196.
[3884] United States' first written submission, para. 1197.
[3885] United States' response to question 61, para. 168.
[3886] United States' response to question 61, para. 168.

notes that neither Article 5(c) of the SCM Agreement, which declares "serious prejudice" to be one of the types of adverse effects covered by Part III of the SCM Agreement, nor paragraph 1 of Article XVI of the GATT 1994 (to which footnote 13 of the SCM Agreement refers) contains a definition of the words "serious prejudice".[3887] However, Article 6 of the SCM Agreement, entitled "Serious Prejudice" does contain a more detailed explanation of the concept of "serious prejudice" as used in Article 5(c) of the SCM Agreement. The chapeau of Article 6.3 states: "{s}erious prejudice in the sense of paragraph (c) of Article 5 may arise in any case where one or several of the following apply." Thus, serious prejudice may arise if one of the forms of serious prejudice enumerated in Article 6.3 is found to exist.[3888] The United States contends that this interpretation of Article 6.3 is further confirmed by the language of paragraph 6.2:

> "Notwithstanding the provisions of paragraph 1, serious prejudice shall not be found if the subsidizing Member demonstrates that the subsidy in question has not resulted in any of the effects enumerated in paragraph 3."[3889]

7.1877 The United States argues that the use of the word "shall" clearly indicates that where none of the effects enumerated in paragraph 3 of Article 6 exists, serious prejudice does not exist and that such an interpretation is also confirmed by the structure of Article 6.[3890] When read together, Articles 6.1, 6.2 and 6.3 originally created two ways for a complaining Member to show serious prejudice.[3891] First, under Article 6.1, prior to its lapsing, the complainant could demonstrate that one of the situations enumerated under Article 6.1(a) through (d) existed. If that was the case, a rebuttable presumption of serious prejudice was established, while Article 6.2 allowed the subsidizing Member to rebut that presumption by demonstrating that the effects enumerated in Article 6.3 did not exist. If the complaining Member was not able to demonstrate that one of the situations in Article 6.1 existed, its second option was to demonstrate that one of the situations in Article 6.3 exists, in which case "serious prejudice …. may arise."[3892] In other words, the structure of Article 6 confirms the interpretation following from the ordinary meaning of Article 6.3 and from the context provided to that provision by Article 6.2; namely, that serious prejudice cannot be found to exist unless the complainant demonstrates that one of the effects enumerated in Article 6.3 exists.[3893]

7.1878 The United States submits that the following statement of the panel in *US – Upland Cotton* is directly relevant in this regard and confirms the foregoing analysis of the United States:

> "Article 6.2 serves to clarify that a prerequisite for a finding of serious prejudice is that one of the four effects-based situations in Article 6.3 must be demonstrated. It indicates to us that demonstration that at least one of the four effects-based situations in Article 6.3 exists is a necessary basis to conclude that serious prejudice exists."[3894]

[3887] United States' response to question 61, para. 169.
[3888] United States' response to question 61, para. 170.
[3889] United States' response to question 61, para. 171.
[3890] United States' response to question 61, paras. 171-172.
[3891] United States' response to question 61, para. 172. The United States argues that, although Article 6.1 of the SCM Agreement has lapsed, the panel in *US – Upland Cotton,* para. 7.1377, n. 1487 found that it could nevertheless provide relevant guidance as to the interpretation of Article 6.3.
[3892] United States' response to question 61, para. 172.
[3893] United States' response to question 61, para. 172.
[3894] Panel Report, *US – Upland Cotton*, para. 7.1380.

BCI deleted, as indicated **[***]**

(iii) Third Parties

Australia

7.1879 Australia submits that the concept of serious prejudice in Article 5(c) of the SCM Agreement should not be considered as covering forms of serious prejudice not already enumerated in Article 6.3 of the same agreement. The chapeau of Article 6.3 explicitly links Article 6.3 to Article 5(c) as an elaboration of the forms that serious prejudice may take.[3895] The absence of any reference in Articles 5 and 6 of the SCM Agreement to additional forms of serious prejudice that could trigger the remedies contained in Article 7 favours an exhaustive interpretation of the list set forth in Article 6.3. This silence on additional forms of serious prejudice contrasts strongly with the detail provided in the rest of Article 6 on the further elements relevant to the Article 6.3 examination.[3896] Furthermore, Australia considers that Article 6.2 "serves to clarify that a prerequisite for a finding of serious prejudice is that at least one of the four effects-based situations in Article 6.3 must be demonstrated."[3897] This means that no additional forms of serious prejudice, independent of Article 6.3, can activate the remedies in Article 7 of the SCM Agreement.[3898]

7.1880 Australia argues that there is no legal basis for the European Communities' assertion that the 1992 Agreement constitutes context for the interpretation of the SCM Agreement in this dispute.[3899] Under the terms of Article 1 of the DSU, the DSU applies to WTO covered agreements and that, as the 1992 Agreement is not a covered agreement, it does not fall within the scope of Article 7.2 of the DSU and does not constitute applicable law in this dispute. Australia submits that the Appellate Body has made it clear that the DSU operates in relation to covered agreements only and that it is not the function of panels to seek to clarify the provisions of non-covered agreements.[3900]

7.1881 Australia argues that there is a body of WTO case law to support the view that Article 31(3)(c) of the Vienna Convention refers to the rules of international law applicable in the relations between the States which have consented to be bound by the treaty which is being interpreted, and for which that treaty is in force.[3901] The Appellate Body has recognized that Article 31(3)(c) permitted it to seek additional interpretative guidance from general principles of international law.[3902] These principles are rules of international law applicable between the WTO membership as a whole and not a subset of that membership. Australia does not consider that the rules of international law contained in the 1992 Agreement, which is only applicable in the relations between subsets of parties to the SCM Agreement, can be taken into account under Article 31(3)(c) of the Vienna Convention in interpreting the SCM Agreement. More generally, given that the application of Article 31(3)(c) has potentially significant systemic implications for the WTO dispute settlement system, the Panel in this dispute should approach the issue with a degree of caution.[3903]

[3895] Australia's response to questions, 5 December 2007.
[3896] Australia's response to questions, 5 December 2007.
[3897] Australia's response to questions, 5 December 2007, referring to Panel Report, *US - Upland Cotton*, para. 7.1380.
[3898] Australia's response to questions, 5 December 2007.
[3899] Australia's written submission, para. 71.
[3900] Australia's written submission, para. 71, citing, Appellate Body Report, *Mexico – Taxes on Soft Drinks*, para. 49.
[3901] Australia's written submission, para. 72.
[3902] Australia's written submission, para. 72, referring to Appellate Body Report, *US – Shrimp*, para. 158.
[3903] Australia's written submission, paras. 72-73.

BCI deleted, as indicated **[***]**

Brazil

7.1882 Brazil argues that the Panel should reject the European Communities' argument that the subsidies constitute serious prejudice to the interests of the European Communities within the meaning of Article 5(c) of the SCM Agreement because the United States violated its obligations under the 1992 Agreement.[3904]

7.1883 First, the SCM Agreement is the appropriate instrument to address subsidies in the civil aircraft industry in a WTO dispute settlement proceeding. The 1992 Agreement is not a WTO covered agreement, and is outside the Panel's terms of reference. Because the Panel lacks jurisdiction to determine the rights and obligations of the parties under the 1992 Agreement, the Panel necessarily cannot determine whether the United States violated the substantive provisions of the 1992 Agreement.[3905]

7.1884 Second, because the European Communities is alleging that a violation of the 1992 Agreement is sufficient to succeed on its claim of serious prejudice, it is seeking to apply the 1992 Agreement as substantive law between the parties rather than as context for the interpretation of any particular provision of the SCM Agreement. An appropriate analysis should lead the Panel to find that an alleged substantive violation of the 1992 Agreement cannot constitute "serious prejudice" with the meaning of Article 5(c) of the SCM Agreement.[3906]

7.1885 Third, Brazil objects to the use of the 1992 Agreement to interpret provisions of the SCM Agreement, to the extent that the European Communities is, in fact, attempting to do so. Consistent with the findings of the panel in *EC – Approval and Marketing of Biotech Products*[3907], the reference to "parties" in Article 31(3)(c) of the Vienna Convention must be interpreted to mean all of the parties to the treaty being interpreted, in this case, the SCM Agreement. Brazil considers that a bilateral treaty such as the 1992 Agreement simply does not reflect the common intentions of all WTO Members, and as a result, cannot be used to inform what WTO Members intended when drafting the SCM Agreement. Any other interpretation would lead to absurd and prejudicial results, with third parties seeing their WTO rights affected by a bilateral treaty to which they were not a party and with the provisions of the SCM Agreement potentially being interpreted differently for different WTO Members.[3908] Brazil submits alternatively that, if the Panel interprets the term "parties" in Article 31(3)(c) of the Vienna Convention narrowly to refer to the parties to the 1992 Agreement, any interpretation of the SCM Agreement based on the 1992 Agreement can only apply to the bilateral relations between the United States and the European Communities, as confirmed by Articles 34 and 41(1)(b)(i) of the Vienna Convention.[3909]

Canada

7.1886 Canada argues that read together, footnote 13 of Article 6.2 and Article 6.3 of the SCM Agreement suggest that a panel may only make a finding of serious prejudice if it can establish one of the effects listed in Article 6.3 or the threat of such an effect. However, once having made such a finding, a panel has the flexibility to characterize other effects of the subsidy at issue as a form of serious prejudice, provided those other effects are closely linked to the effects listed in Article 6.3.[3910]

[3904] Brazil's written submission, para. 75; response to questions, 5 December 2007, paras. 7 and 8.
[3905] Brazil's written submission, para. 76.
[3906] Brazil's written submission, para. 77.
[3907] Panel Report, *EC-Approval and Marketing of Biotech Products*, para. 7.68.
[3908] Brazil's written submission, para. 78.
[3909] Brazil's written submission, para. 79.
[3910] Canada's response to questions, 5 December 2007, paras. 7-11. See also, Canada's oral statement, paras. 29-36.

7.1887 Canada submits that footnote 13 to Article 6.2 imports into the SCM Agreement an unbroken chain of meaning for the term serious prejudice, encompassing the concepts set out in Article 6.3, but also recognizing the possibility of additional forms of serious prejudice closely linked to those core concepts.[3911] Article 6.2 appears to suggest that serious prejudice cannot be established if none of the core concepts in Article 6.3 are present. Canada argues that Article 6.3 itself is drafted to permit non-enumerated forms of serious prejudice, while providing particular guidance on the core concepts that have given life to the term serious prejudice since its inception in GATT 1947.[3912]

Japan

7.1888 Japan argues that the text of Article 5 clearly requires a Member to show that serious prejudice was caused "through the *use* of any subsidy {as defined in Article 1}."[3913] Japan considers that the European Communities' arguments concerning serious prejudice do not properly apply the causation test of Article 5. It is the "use of any subsidy" that must be shown to cause serious prejudice. The European Communities has not applied this causation formula as set out in Article 5, but instead argues that the provision of subsidies in excess of commitments under the 1992 Agreement by itself constitutes serious prejudice. This argument is inconsistent with Article 5, which requires a showing that the use of the subsidies at issue is the cause of adverse effects.[3914]

7.1889 Japan also observes that the European Communities appears to alternatively argue that the United States has caused serious prejudice merely by "granting" subsidies in supposed violation of the 1992 Agreement.[3915] Not only is this not the analysis required by the SCM Agreement, but it remains unclear what constitutes the serious prejudice suffered by the European Communities.[3916]

Korea

7.1890 Korea argues that Article 6.3 of the SCM Agreement provides an exhaustive list of instances of serious prejudice as mentioned in Article 5(c) of the SCM Agreement. The terms used in Article 6.3 are definitive in nature, by providing that "{s}erious prejudice…may arise in any case where one or several of the following apply." Korea argues that the ordinary meaning of this sentence is that, for there to be a serious prejudice, one or more conditions listed in the article must exist. This indicates that what is provided in Article 6.3 is an exhaustive list.[3917] Furthermore, Article 6.3 does not use a term indicating an exemplary nature, such as "including," "*inter alia,*" "for instance," "such as". Rather, Article 6.3 uses the rather broad term "any case" where one or several enumerated conditions apply. This suggests that the drafters attempted to confine the instances of serious prejudice to only these enumerated situations.[3918]

(b) Evaluation by the Panel

7.1891 The Panel recalls that the practice of judicial economy allows a panel to refrain from making multiple findings that a measure is inconsistent with various provisions when a single, or a certain number of findings of inconsistency, would suffice to resolve the dispute.[3919]

[3911] Canada's response to questions, 5 December 2007, para. 12; Canada's oral statement, para. 30.
[3912] Canada's response to questions, 5 December 2007, para. 12.
[3913] Japan's oral statement, para. 6.
[3914] Japan's oral statement, para. 7.
[3915] European Communities' first written submission, para. 1055.
[3916] Japan's oral statement, para. 8.
[3917] Korea's response to questions, 5 December 2007.
[3918] Korea's response to questions, 5 December 2007.
[3919] Appellate Body Report, *Canada – Wheat Exports and Grain Imports*, para. 133.

BCI deleted, as indicated **[***]**

7.1892 The Panel recalls that Article 11 of the DSU provides, in relevant part:

> "...a panel should make an objective assessment of the matter before it, including an objective assessment of the facts of the case and the applicability of and conformity with the relevant covered agreements, and make *such other findings as will assist the DSB in making the recommendations or in giving the rulings provided for in the covered agreements*." (Emphasis added)

7.1893 The Panel does not consider that making findings in relation to this serious prejudice claim would assist the DSB in making the recommendations or in giving the rulings provided for in the SCM Agreement. The Panel therefore exercises judicial economy with respect to this claim.

BCI deleted, as indicated **[***]**

Appendix VII.F.1: Parties' arguments regarding the links between the U.S. Government funded R&D and the specific technologies applied to the 787

A. INTRODUCTION

1. The European Communities has sought to demonstrate that the aeronautics R&D subsidies provided Boeing with *usable technologies* in key technology areas, as well as *knowledge, experience* and *confidence* toward developing successful commercial technologies and processes.[3920] It has then sought to demonstrate how those technologies, as well as the knowledge, experience and confidence with respect to various technologies was applied to, or facilitated the development of, the innovative technological features of the 787. The European Communities groups these key technologies into the following six technology areas:

(a) Composites technologies, primarily the design, development and manufacturing of 787 composite fuselages and wings;

(b) More-electric architecture;

(c) Open systems architecture;

(d) Enhanced aerodynamics and structural design;

(e) Noise reduction technologies; and

(f) Health management systems.[3921]

2. This Appendix first describes the technology areas identified above as they relate to technologies that are applied to the 787. To provide further context to the Panel's analysis, this Appendix next explains its understanding of the process for designing and manufacturing the 787.[3922] Finally, this Appendix provides a summary of the specific arguments made by the parties concerning the links between the research that Boeing conducted under the aeronautics R&D subsidies and the technologies applied to the 787.

B. DESCRIPTION OF THE RELEVANT TECHNOLOGY AREAS

3. A "**composite**" is a composition of two or more materials on a macroscopic scale, working together to produce material properties that are different to the properties of those elements on their own. Most composites consist of a bulk material (the matrix), a reinforcement, usually in fibre form which is added primarily to increase the strength and stiffness of the matrix, a resin and a curing agent. The resin acts to hold the fibres together and to transfer the load to the fibres in the fabricated composite part. The curing agent (or hardener) acts as a catalyst in curing the resin to a hard plastic. The most common composites appear to be divided into three groups: (i) polymer matrix composites, or fibre-reinforced plastics; these materials use a polymer-based resin as the matrix and a variety of

[3920] European Communities' first written submission, para. 1352. According to the European Communities, the knowledge, experience and confidence gained by Boeing through its participation in US government-supported aeronautics R&D programmes enabled Boeing to accelerate its development, production and delivery of the 787 and "is in fact the crux of the causal connection between the US R&D subsidies and the 787", European Communities' first written submission, para. 1356; Annex C, para. 8.

[3921] European Communities' first written submission, para. 1350.

[3922] The background factual material presented in this Appendix is based on evidence submitted to the Panel by the parties in the course of these proceedings and therefore generally refers to events or developments that occurred in 2006 as being "recent".

fibres such as glass, carbon and aramid as the reinforcement[3923]; (ii) metal matrix composites, which use a metal such as aluminium as the matrix, reinforced with fibres such as silicon arbide; and (iii) ceramic matrix composites (used in very high temperature environments) which use a ceramic as the matrix reinforced with short fibres such as those made from silicon carbide and boron nitrade.[3924]

4. In general, composites manufacturing processes involve (i) various processes for the combination of the resin, fibre and matrix material; (ii) the "curing" of the composite material in an autoclave, a high-pressure, high-temperature oven; (iii) post-processing, in which machine tools are used to drill holes and cut shapes; and (iv) non-destructive inspection (NDI) testing for faults.[3925] The European Communities alleges that a substantial focus of the U.S. government's composites research efforts was on the first stage of composites manufacturing described in (i) above; i.e. finding the best and most cost-effective way of combining and shaping composite materials.[3926]

5. There are two general and distinct methods for combining and shaping the elements that form the composite material. The first (pre-impregnation) involves combining the resin and fibre *before* shaping that material on a mandrel (a special mould in the shape of the part that is being produced). One example of this first general method involves the combination of resin and curing agent to create a "prepreg" material which is then "impregnated" into the reinforcing fibre, either by dipping the reinforcement through the liquid resin or through the application of heat or pressure.[3927] The second general method for combining the elements of the composite materials (pre-forming) involves first shaping the fibre into the desired shape, and then combining it with the resin by infusing the resin into the "pre-form", using techniques such as resin film infusion (RFI) or resin transfer moulding (RTM). Resin film infusion involves dry fabrics being arranged in a mould, interleaved with layers of semi-solid resin film. The structure is vacuum-bagged to remove air through the dry fabrics and then heated in an autoclave. The heating allows the resin to melt and flow into the air-free fabrics, before curing. Resin transfer moulding also involves placing dry fabrics in a mould, however they are held together by a binder. A second mould tool is then clamped over the first mould, and resin is injected into the cavity. Once the fabric is fully wet with resin, the resin inlets are closed and the laminate is allowed to cure in an autoclave. Where vacuum pressure is used to assist the infusion of the resin through the fibre, the process is referred to as vacuum-assisted resin infusion.

6. The aerospace industry has traditionally regarded the use of carbon-fibre reinforced composites (CRFPs) manufactured through pre-impregnation to be extremely expensive, because individually cut pre-pregs needed to be manually applied by highly trained technicians. Automated tape laying (ATL) and automated fibre placement (AFP) technologies presented significant opportunities for cost and efficiency improvements. The ATL and AFP processes are functionally similar, but each is used differently to achieve specific structure construction goals to provide strength or stiffness. In both processes, the fibre is shaped first and then shaped on a mandrel. In both

[3923] One example of a polymer matrix composite is the carbon fibre reinforced plastic (CFRP) on the 787 primary structure.

[3924] Tim Sommer et al., Composite Technologies, November 2006, Exhibit EC-14 (BCI), pp. 3-4.

[3925] Nondestructive inspection (NDI) is a wide group of analysis techniques used in science and industry to evaluate the properties of a material, component or system without causing damage. Because NDI does not permanently alter the article being inspected, it is a highly-valuable technique that can save both money and time in product evaluation, troubleshooting, and research. Common NDI methods include thermal, ultrasonic, electromagnetic, radiography and optical methods; Tim Sommer et al., Composite Technologies, November 2006, Exhibit EC-14 (BCI), pp. 48-50.

[3926] European Communities' first written submission, Annex C, para. 41.

[3927] The impregnated reinforcements (or prepregs) can take three main forms: woven fabrics, roving and unidirectional tape. Fabrics and tapes are provided as continuous rolls in various widths and lengths. The fabric or tape thickness constitutes one ply in the construction of a multi-ply lay up. The prepreg material is wound onto spools and is used for filament winding, in which the prepreg material is laid down over a mandrel with the resin-coated fibres being laid down in the desired pattern.

processes, a delivery head mounted on a robotic arm lays or places pre-impregnated tape or fibre on a mandrel. The main difference is that ATL machinery lays tape (which consists of fibres aligned together in a single direction), while AFP lays down multiple tape sections over highly contoured surfaces in multiple fibre axes (i.e. the fibres need not be aligned in a single direction). Tape is wider than individual fibres, meaning that ATL can cover a greater area in a shorter period of time, however, it cannot produce complicated three-dimensional shapes. AFP takes longer to cover the same size area, but can produce shapes with complex three-dimensional curvatures.[3928]

7. A 1994 NASA report on composites indicates that the first structural composite aircraft components, made from glass fibre reinforced plastics (GFRP) were introduced between 1950 and 1960.[3929] Boron filaments and carbon fibres first became available in about 1965. Their high compression strength and stiffness, in combination with low density, enabled boron fibre reinforced plastics (BFRP) and CFRP to be used instead of aluminium for high performance airplane structures.[3930] Since the mid-1960s, many composite structural components have been designed and produced for U.S. and foreign military aircraft. Much of the advanced composite structures research and development in the United States between the mid-1960s until the mid-1990s has been associated with military aircraft applications.[3931] According to a 1994 report by NASA consultant, Richard Hadcock, U.S. military R&D programmes provided much of the technology base for production of composite structures. Until 1973, the price of boron filaments was less than the price of carbon or graphite fibres, and boron/epoxy also had higher specific strength and stiffness than the carbon/epoxy materials that were then available. For these reasons, BFRP was the advanced composite of choice in the late 1960s.[3932] Some of the major European aircraft companies initiated advanced composite structures development programmes in the early 1970s. These included British Aircraft Company and Hawker Siddeley Aviation (both subsequently part of BAE Systems plc) which were involved in structural development of CFRP components.[3933]

8. Based on data presented by a NASA consultant, the following military aircraft had at least one part of the fuselage (forward, mid or rear) fabricated from composite materials: MD AV-8B, Bell/Boeing V-22, Northrop B-2, Dassault Rafale C/M, Eurofighter EFA, MD F-18E/F, Lockheed F-

[3928] Tim Sommer et al., Composite Technologies, November 2006, Exhibit EC-14 (BCI), pp. 18-31.

[3929] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, p. 27, Exhibit EC-792. These components included the fins and rudders of the Grumman E-2A. By 1967, the entire airframe of the small Windecker Eagle was made from GFRP. Since then, GFRP has become one of the standard materials for light aircraft and lightly loaded structural components.

[3930] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 27.

[3931] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 27.

[3932] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 27.

[3933] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, pp. 33-34. Other companies included Aeritalia (Italy), SAAB (Sweden), Dassault Aviation (France), Aérospatiale (France, now part of EADS), Fuji (Japan), Kawasaki (Japan), Mitsubishi (Japan) as well as Russian and Ukrainian aircraft companies.

22; while the following aircraft used composites for either the covers or substructure of the wing box: MD AV-8B, Grumman A6-E, SAAB Gripen, Bell/Boeing V-22, Northrop B-2A, Dassault Rafale C/M, Eurofighter EFA, MD F-18E/F, Mitsubishi FSX and Lockheed F-22. In addition, composite fuselage pieces or wings were then (in the mid-1990s) being developed for various other military aircraft; e.g. Alphajet, Vought VSTOL A, Grumman VSTOL A, GD F-16XL, Grumman X-29, Dassault Rafale A, BAe EAP, IAI Lavi, Northrop YF-23, Lockheed YF-22, and Rockwell/MBB X-31, GD/MD A-12.[3934] By the mid-1990s, Kawasaki Heavy Industries had designed and built an all CFRP wing for the Japanese FS-X fighter aircraft.[3935] The FS-X (later called the F-2) was developed as a semi-indigenous replacement for the McDonnell Douglas F-4. One of the advancements of this aircraft was its innovative use of co-cured composite structures in a larger wing, enabling the curing and bonding of the wing box and skin to take place in a single process. [3936]

9. The Airbus A300, which first flew in 1972, incorporated the following composite components: CFRP/GFRP elevators and rudders, CFRP spoilers, nose landing gear doors, and main landing gear leg fairings, GFRP wing upper surface trailing edge panels and AFRP wing-body fairings and flap track fairings.[3937] Use of composites was extended in 1985 by changing the Airbus A310 vertical stabilizer material from aluminium alloy to CFRP, and again in 1987 for the Airbus A320. On the A320, both horizontal and vertical stabilizers are made from CFRP, as well as the elevators, rudder, ailerons, spoilers, flaps, wing leading and trailing edge access and fixed panels, landing gear doors, and engine cowls and doors.[3938] The larger A330/A340 models use composites for similar components. Prior to Boeing's 787, the Airbus A380 had the highest percentage of composite materials on an LCA, including (i) the vertical tail (an area of 1,238 sq. feet, compared to 573 sq. feet for the composite vertical tail area of the 777), (ii) the horizontal stabilizer (an area of 2,207 sq. feet, compared to 1,090 sq. feet for the 777 horizontal stabilizer), (iii) the center wing box (the first use of composites), and (iv) the rear *unpressurized* fuselage section.[3939] Following various design changes between 2005 and 2007, Airbus' A350XWB (launched in December 2006 and scheduled for first delivery in 2013), will be approximately 52 per cent composites by weight.[3940] The fuselage will be

[3934] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 35, Table A-2.

[3935] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 35. Fuji was also a major subcontractor under this programme.

[3936] In addition, in 1995, Raytheon launched a six-passenger light business jet (Raytheon 390 Premier I) with an all-composite fuselage. The fuselage was a carbon fibre/honeycomb-sandwich construction, produced in two pieces that were bonded at the aft pressure-bulkhead. The fuselage pieces were formed on a wooden mandrel using automated fibre placement (AFP) processes developed on prototype tow-placement machines supplied by Cincinnati Milacron. Graham Warwick, "Raytheon's First" Flight International (October 4, 1995), Exhibit US-306.

[3937] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 37.

[3938] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 37.

[3939] Bair Affidavit, Exhibit US-7, paras. 51-52. The European Communities points out that a crucial advance of the 787 is its use of **[***]**; Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), para. 9.

[3940] "Qatar Airways Signs MOU for 80 A350XWBs worth $16-18 billion; EIS in 2013", Air Transport World Daily News, 31 May 2007, Exhibit US-1003.

constructed from CFRP panels with composite frames, and the wings and empennage will be also be CFRP.[3941]

10. Boeing started design of both the 757 and 767 models of LCA in the late 1970s.[3942] Boeing used CFRP composites for the elevators, rudders, spoilers, landing gear doors and engine cowlings for both airplanes. The flaps of the 757 were also CFRP. When Boeing introduced the 737-300 in 1985, CFRP composites were selected for the ailerons, elevators, rudder, fairings and engine cowl doors. The 777, which commenced service in 1994, uses CFRP for the control surfaces, floor beams, main landing gear doors, engine nacelles and, most significantly, the entire empennage.[3943] Other composite components on the 777 include the wing-fuselage fairings and wing fixed trailing edge panels. The CFRP horizontal and vertical stabilizers on the 777 are manufactured by Boeing, while many of the other composite components are supplied to Boeing by U.S. and foreign subcontractors. For example, the Japan Aircraft Development Corporation is reported as having contributed 21 percent to the Boeing 777 project for design and production of the fuselage, center wing and wing body fairings for the life of the 777 programme.[3944] Grumman (U.S.) was reportedly awarded a 10-year, $400 million contract to produce the 777 composite inboard flaps and spoilers, Alenia (Italy) was producing the outboard flaps, CASA (Spain, now part of EADS), the ailerons and Rockwell (U.S.), the floor beams.[3945]

11. A discussion of the application of composites technology on the 787 is included as part of the discussion in Section C of this Appendix.

12. A "**more-electric**" aircraft uses electrical power to drive secondary mechanical systems, instead of a combination of hydraulic, pneumatic and electrical power.[3946] The 787 is a more-electric aircraft. Unlike existing LCA, electrical systems will be used on the 787 to generate power, as well as to operate components such as the (i) engine starters, (ii) brakes, (iii) de-icing system, (iv) secondary flight controls, and (v) air conditioning systems. The "more-electric" systems architecture of the 787 uses fly-by-wire flight controls[3947], and electrical power instead of pneumatic or hydraulic power to operate a variety of the aircraft's secondary mechanical systems. The 787 will eliminate all of its pneumatic bleed-air systems[3948], while maintaining certain hydraulic systems.[3949] One of the most

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[3941] "Airbus confirms switch to composite frame on A350 XWB," ATW Daily News, 20 September 2007, Exhibit EC-1301.

[3942] The 767 made its first flight in 1981, followed by the 757 in 1982; Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 37.

[3943] The "empennage" refers to the tail section of the aircraft. It gives stability to the aircraft and controls the flight dynamics of pitch and yaw.

[3944] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 49.

[3945] Richard N. Hadcock, "A Chronology of Advanced Composite Applications", in Louis F. Vosteen and Richard N. Hadcock, Composite Chronicles: A Study of the Lessons Learned in the Development, Production and Service of Composite Structures, NASA Contractor Report 4620, November 1994, Exhibit EC-792, p. 49.

[3946] Andrew Doyle, "More and more electric," Flight International, 28 August-3 September 1996, Exhibit EC-821, p. 124.

[3947] Boeing Presentation #16, Exhibit EC-807 (BCI), p. 1.

[3948] Boeing Presentation #3, Exhibit EC-353 (BCI), p. 1; James Wallace, "Introducing … Boeing's electric 7E7," Exhibit EC-820.

[3949] Elimination of all pneumatic and hydraulic systems would result in an "all-electric" aircraft. Andrew Doyle, "More and more electric," Flight International, 28 August-3 September 1996, 124, Exhibit EC-

significant accomplishments of the 787's "more-electric" architecture is the replacement of pneumatic systems with electrical systems. Pneumatic systems are complex, prone to failure, and require frequent maintenance checks.[3950] They entail extracting bleed air (pressurized, hot air) from the aircraft engines and carrying that air via heavy ducts throughout the plane to operate a variety of mechanical systems.[3951] Instead of using these pneumatic systems, each 787 will have four 250 kVA generators on the engines and two 225 kVA generators on the auxiliary power unit to generate power[3952], with no need for ducts that carry bleed air throughout the aircraft.[3953] By replacing bleed air with electric generators as the source of energy, up to 35 per cent less power is extracted from the engines of the 787 than LCA with traditional pneumatic systems.[3954] As bleed air is not diverted from the engines, the high-speed air flowing through the engine can focus on thrust, thereby lowering the 787's overall fuel consumption.[3955]

13. "**Open systems architecture**" relates to the avionics of an aircraft and how onboard systems are installed to interact with each other.[3956] Under a traditional aeronautics model, software runs on customized hardware, with separate computing systems for each function. This means that systems such as radios and displays on the flight deck or entertainment systems in the passenger cabin cannot easily be upgraded. The 787 utilizes a common core computing system based on open systems architecture principles. The open nature of the architecture is such that all software functions can be run on a central host computing platform using an industry-specified standard interface. The open systems architecture of the 787 makes it possible for Boeing to simply plug in a new component, and let installation software integrate the new equipment with the airplane's central computer system. The software is separable from the host hardware, such that software can be developed by third party providers using the industry standards interface, and runs on the host computing platform without changing the hardware. This will allow for easier upgrade of the airplane functionality over time, and will also alleviate some of the hardware.[3957]

14. "**Enhanced aerodynamics and structural design**" technologies refer to various computer design software codes (CFD codes such as TRANAIR and OVERFLOW as well as "Product Lifecycle Management" tools such as CATIA) and specific aerodynamic and structural improvements to the wings of the 787. CFD codes are computer design software which enable aeronautic engineers to understand the aerodynamic forces acting on an airplane by evaluating the flowfield around the vehicle. Through the use of the CFD codes, engineers are able to quickly and accurately simulate complex airflows about an aircraft. This enables the engineers to arrive at the optimum aerodynamic design for the aircraft, minimizes the number of wind tunnel tests required, and in so doing, speeds up the design process and makes it less costly. CFD codes were first used in aerodynamic design in the 1960s.[3958] Since that time, they have acquired increasing importance in the aerodynamic design

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821. Final CRAD Report, Evaluation of All-Electric Secondary Power for Transport Aircraft, Report Number MDC 91K0418, January 1992, Exhibit EC-822.

[3950] Passing the Value Test: The Boeing Technology Advantage, Boeing Point-to-Point, June 2006, Exhibit EC-784.

[3951] Boeing publication "Point to Point", June 2006, Volume 1 Issue 4, Exhibit EC-784.

[3952] Boeing 787 Dreamliner Program Fact Sheet, Exhibit EC-340.

[3953] James Wallace, "Introducing … Boeing's electric 7E7," Seattle Post-Intelligencer, 20 May 2004, Exhibit EC-820.

[3954] Boeing 787 Dreamliner Program Fact Sheet, Exhibit EC-340.

[3955] Passing the Value Test: The Boeing Technology Advantage, Boeing Point-to-Point, June 2006, Exhibit EC-784; Meryl Getline, "Dreaming of a more pleasant flight," USA Today, 9 June 2006, Exhibit EC-824.

[3956] European Communities' first written submission, Annex C, para. 79.

[3957] Bair Affidavit, Exhibit US-7, para. 63.

[3958] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 143.

process.[3959] Most CFD codes are based upon partial differential equations, known as the Navier-Stokes equations, which show how the velocity, pressure, temperature and density of a moving fluid (both liquids and gases) are related. The CFD codes usually incorporate some simplifications of the equations to reduce the complexity of the computation. A central issue in computational fluid dynamics is how to treat continuous fluids in a discrete manner on a computer so that the model is suitable for numerical evaluation. This is usually done by dividing the space in issue into a grid or mesh. The grid generation process has typically presented a bottleneck in the overall CFD process time.[3960] For complex flow analyses, the task of generating the grid is a labour-intensive and slow process.

15. The European Communities focuses on two codes in its submissions, namely TRANAIR and OVERFLOW. TRANAIR is a CFD code that enables multipoint design optimization. This means that the design of the aircraft can be optimized for multiple flight conditions and that the aerodynamic objectives can be balanced by other constraints imposed by structures or by manufacturing, for example.[3961] OVERFLOW is a 3-D Navier-Stokes flow solver. It can use an "overset grid scheme", in which grids are generated about individual components, such as a wing or fuselage. The overlapped grids are then tied together to create a grid system about the entire vehicle.[3962] OVERFLOW was developed in the early 1990s by NASA alone and not under contract to Boeing or any other entity.[3963] It was created as part of a collaborative effort between NASA Johnson Space Center and NASA Ames Research Center.[3964]

16. The CATIA software programme is used by Boeing in the 787 production and assembly process in combination with other software, known collectively as the "Product Lifecycle Management" tools.[3965] These tools, as used on the 787, allow every aspect of the airplane and its manufacturing processes to be designed, built and tested digitally before production begins.[3966] Boeing has standardized the CATIA software package as the basis of its digital design process across the entire company as well as across its global system of partners and suppliers.[3967] The common system allows real-time collaboration among engineers spread throughout the world, all working from

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[3959] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 143; Testimony of Michael Garrett, Director, Airplane Performance, Boeing Commercial Airplanes, Before the United States Senate Committee on Commerce, Science and Transportation, Subcommittee on Technology, Innovation, and Competitiveness, 19 July 2006, Exhibit EC-379, p. 3.

[3960] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 150; Insights "Overflow code empowers computational fluid dynamics", Exhibit EC-1346, p. 2.

[3961] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 147-148; Calmar Research Corporation: TRANAIR++, Exhibit US-1235.

[3962] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 149-152; Insights "Overflow code empowers computational fluid dynamics", Exhibit EC-1346.

[3963] See e.g. Insights "Overflow code empowers computational fluid dynamics", Exhibit EC-1346, p.1 and Affidavit of Douglas Ball, Exhibit US-1257, para. 10.

[3964] Insights "Overflow code empowers computational fluid dynamics", Exhibit EC-1346, p.1.

[3965] Bair Affidavit, Exhibit US-7, para. 66. Boeing uses CATIA in combination with DELMIA, for engineering lean manufacturing processes, ENOVIA for decision support and life-cycle management, and SMARTEAM.

[3966] Bair Affidavit, Exhibit US-7, para. 66.

[3967] See e.g. CRA International Report on IR&D and B&P, Exhibit EC-5, p. 40 and Design News; Beth Stackpole, "Boeing's Brave New World of Product Development; The Global Collaboration Environment lets 787 Partners Design, Build and Test Components and Manufacturing Processes for the Aircraft Digitally, Prior to Physical Production," Design News, 4 June, 2007, Exhibit US-317.

a 3-D digital copy of the airplane held on the central Boeing server.[3968] This ensures that all partners in the global team have access to the same product definition data at the same time and avoids the difficulties that arise when data must be translated or exchanged between different computer-aided design tools.[3969] The use of CATIA and other related software throughout the global network means that when the components of the airplane are shipped to the common assembly facility, there is less likelihood that the parts will not fit together, or that successive iterations of the manufacturing process will be required.[3970]

17. The European Communities' allegations in relation to the specific aerodynamic and structural improvements to the wings of the 787 concern (i) the 787's "high-lift" system; and (ii) Boeing"s use of hydraulically actuated spoilers on the 787. The "high-lift" system of an aircraft refers to the elements of the wing that can be extended at the leading or the trailing edge to provide lift, such as the flaps, slats, flaperons and ailerons. CFD analysis for the high-lift components on a wing has traditionally been difficult due to the complex geometry involved.[3971] The difficulty lies in generating a grid to model the fluid flow over the high-lift configuration. Spoilers are small hinged plates that can be used to slow an aircraft, make it descend or generate a rolling motion. Hydraulically actuated spoilers are spoilers that are driven by hydraulic power.

18. "**Noise reduction technologies**" refer to a group of technologies that reduce the noise generated by an aircraft and, in the case of the 787, involve the chevrons, joint-less acoustic treatment, quiet slats and flaps, low noise landing gear, low weight structures and improved airline performance. Aircraft noise is generated by anything related to the aircraft that creates pressure fluctuations. In most cases, it is some form of flow distortion or turbulent flow. Noise heard on the ground is composed of engine noise and airframe noise. Landing gear noise is a major contributor, along with flap noise, to airframe noise.[3972] During take-off, engine noise is the dominant source of noise and airframe noise less so, while, during landing, both engine noise and airframe noise are important contributors to overall aircraft noise.[3973] NASA research indicates that when an airliner is on approach, air rushing past the complex structure of the lowered landing gear can produce noise almost as loud as that of the engines.[3974] Chevrons are zigzag or saw-tooth shapes at the end of the nacelle[3975], with tips that are bent very slightly into the flow and reduce the jet noise component of the engine noise.[3976] Chevrons reduce jet blast noise by controlling the way that air mixes after passing through and around the engine.[3977] The serrated design produces a better mix of engine's exhaust gas and air passing through and around the nacelle, which reduces the exhaust noise that hits the rear of

[3968] The Seattle Times, "Boeing shares work, but guards its secrets", Exhibit EC-1167.

[3969] Beth Stackpole, "Boeing's Brave New World of Product Development; The Global Collaboration Environment lets 787 Partners Design, Build and Test Components and Manufacturing Processes for the Aircraft Digitally, Prior to Physical Production," Design News, 4 June, 2007, Exhibit US-317.

[3970] Edward Cone, "Boeing: New Jet, New Way of Doing Business," Eweek.com, 25 April, 2007, Exhibit US-318.

[3971] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 150.

[3972] William H. Herkes, The Quiet Technology Demonstrator Program: Flight Validation of Airplane Noise-Reduction Concepts, AIAA 2006-2720, 8-10 May 2006, Exhibit EC-849.

[3973] This is partly due to the fact that the landing gear is stowed and the flaps are only deployed to a small deflection.

[3974] Results of NASA Aircraft Noise Research, Exhibit EC-390

[3975] A nacelle is the streamlined outer casing of an aircraft engine.

[3976] Jet noise is due to turbulent mixing between jets and the noise generation mechanism is very complex. When the chevrons enhance mixing by the right amount, the total jet noise is reduced. Too much mixing increases the noise, while too little results in no noise reduction benefits; Hushing the roar, Aerospace America, June 2006, Exhibit EC-1342.

[3977] Boeing Team Working to Make Jetliners Quieter, Exhibit EC-391.

the fuselage, resulting in quieter take-offs.[3978] Joint-less acoustic treatment refers to acoustic nacelle inlet liners. The inlet nacelle surface is usually made of an acoustically absorbent surface. The acoustic absorber (called the acoustic lining) usually consists of a perforated sheet at the surface, behind which is a layer of honeycomb core material, followed by a non-porous back sheet. The depth of the honey comb core and the properties of the perforated face sheet (e.g. hole diameter, sheet thickness, core depth) determine the frequency at which sound is absorbed, with a deeper liner absorbing a lower frequency of sound. Quiet flaps and slats relate to an aircraft's high-lift system. High-lift systems include the flaps and slats used to increase the lift performance of the wing, allowing the airplane to take off and land safely and efficiently. Low-noise landing gear relates to technologies that reduce landing gear noise. The Panel understands the European Communities' reference to "low weight structures" to be a reference to the composites solutions applied throughout the 787[3979] and its reference to "improved airplane performance" to mean that one aspect of overall improved airplane performance is reduced noise, not that improved airplane performance is a specific low noise technology that enables the 787 to be a quiet aircraft.

19. "**Health management systems**" refer to systems that allow for the monitoring of the health of the different parts of an aircraft, including aircraft systems and certain aircraft structures, leading to lower maintenance costs for airline operators.[3980] The 787 will employ health monitoring technologies to monitor aircraft flight systems such as the hydraulic systems and electric braking systems.[3981] Structural health monitoring technologies, including embedded sensors, will also monitor structural health around the 787's cargo doors and landing gear.[3982] Mathematical algorithms and neural networks process the information collected by these sensors.[3983] The health management system of the 787 has "new enabling technologies that turn airplane operating data into actionable information and knowledge."[3984] These new enabling technologies include the "sensors being built into the 787 {that} will track the performance of different parts and send out alerts if something starts to fail."[3985] These sensors will also help pilots in the cockpit report problems they see.[3986] The information from these sensors can be relayed to the ground via satellite in real-time[3987], which allows Boeing to offer immediate maintenance service to its airline customers and makes regular routine inspections at short intervals less necessary.[3988]

[3978] Boeing Flight Test Journal, Future Looks Quiet, 20 September 2005, Exhibit EC 393.

[3979] This understanding is confirmed by a Boeing presentation submitted by the European Communities, indicating that the use of composites means that the 787 is lighter, with less thrust and therefore less noise; Larry Craig, "Boeing Noise Technology," Los Angeles World Airports Community Noise Roundtable, 13 September 2006, Exhibit EC-1341.

[3980] European Communities' first written submission, Annex C, paras. 110 - 113. Boeing Presentation #20, Exhibit EC-854 (BCI), p.4.

[3981] Boeing Presentation #3, Exhibit EC-353 (BCI), p.8.

[3982] Boeing Presentation #19, Exhibit EC-829 (BCI), p.5.

[3983] Boeing Presentation #19, Exhibit EC-829 (BCI), pp. 1-2. Boeing Presentation #20, Exhibit EC-854 (BCI), p. 5. Boeing, "A golden opportunity to become a lower-cost carrier. Guaranteed. 787 Dreamliner, GoldCare," Exhibit EC-855, p. 3.Boeing Presentation #19, Exhibit EC-829 (BCI), p. 5. Boeing Presentation #3, Exhibit EC-353 (BCI), p. 10.

[3984] GoldCare – The 787 Revolution Now Revolutionizes Service, Boeing Website, Exhibit EC-852.

[3985] Bryan Corliss, "Boeing stressing its 787 'GoldCare' service," HeraldNet, 8 May 2006, Exhibit EC-856. Bill Sweetman, "Boeing, Boeing, Gone?" Aviation & Space, May 2004, Exhibit EC-857.

[3986] Bryan Corliss, "Boeing stressing its 787 'GoldCare' service," HeraldNet, 8 May 2006, Exhibit EC-856.

[3987] Bryan Corliss, "Boeing stressing its 787 'GoldCare' service," HeraldNet, 8 May 2006, Exhibit EC-856. Boeing, "A golden opportunity to become a lower-cost carrier. Guaranteed. 787 Dreamliner, GoldCare," Exhibit EC-855, p. 3.

[3988] European Communities' first written submission, Annex C, para. 113. 7E7 Dreamliner, Structural Health Management Technology Implementation on Commercial Airplanes, undated, Exhibit EC-829 (BCI), p. 18.

BCI deleted, as indicated **[***]**

C. DESIGN, MANUFACTURE AND ASSEMBLY OF THE 787

20. This section of the Appendix provides some background information regarding the design and manufacture of the fuselage of an aircraft in order to facilitate understanding of the parties' arguments concerning the composite fuselage of the 787. It also describes the process by which the 787 is being constructed; namely, by the outsourcing of certain design and manufacturing functions to key suppliers throughout the world as this aspect of the development and production of the 787 is important to an understanding of certain of the United States' rebuttal arguments.

21. The fuselage of an airplane (whether constructed from aluminium or from composites) is built around a hollow, cylindrical skeleton, which can be visualized as a birdcage laid on its side. Narrow hoops called "frames" trace the circumference of the cage. "Stringers" run lengthwise, perpendicular to the frames which are used to create stiffness.[3989] Each frame contains openings (mouse holes) that allow the frames to be placed crosswise over the stringers.[3990] To form the smooth, aerodynamic exterior, this lattice is enclosed by "skins" which are attached to the outside of the structure. The skins are less than a quarter of an inch thick in most places.[3991] The fuselage of an aircraft has traditionally been made from several large panels that are bolted together to form a cylinder. However, bolting composite panels together requires that the edges of the panels be made thicker to accommodate the bolts, adding to the weight and necessitating seams and joints that fatigue like their aluminium counterparts and require additional rounds of maintenance.

22. The 787 fuselage is constructed from seamless 360º barrel sections that are pieced together during final assembly. The 360º barrel sections are made from a solid laminate "skin" that is built around a skeleton made up of frames and stringers. Production of the 360º composite barrel sections involves (i) wrapping the prepreg material around a mould (or mandrel) having the shape of the *inside* surface of the fuselage, referred to as inside mould line (IML) tooling[3992]; (ii) securing the composite-wrapped mandrels with outer mould line cauls (OMLs) to give the desired shape to the outside of the composite fuselage and covering the whole structure with vacuum curing bags; (iii) curing the fuselage sections as a single piece in a pressurized oven; and (iv) after curing, collapsing the internal mandrel and removing it from the stiffened composite structure.[3993]

23. The frames, stringers and skin of the 787 are all constructed of composite material. The frames of the 787 fuselage are created using a bulk resin infused (BRI) technique, in which the dry carbon fibre pre-form is placed onto a bed of resin in a single open mould. The resin infusion process occurs after the pre-form fibre and the resin are placed under vacuum pressure, and the resin is heated and drawn through the pre-form fiber. The stringers are constructed using a forming process that entails the use of mechanical pressure to form a flat piece of composite material (the stringer charge) into an automated, movable mould. Each such stringer must be tailored for its unique location on the fuselage; thus, once formed, the 787 stringers undergo a multiple axis machine trim, which allows them to be cut into required profiles.[3994] The composite skin is made using AFP processes from Toray T3900 intermediate modulus fibre prepreg material, an epoxy-infused material supplied by Toray Industries (of Japan), which was originally developed and used on the 777.[3995]

[3989] Boeing Bets Big On A Plastic Plane, Chicago Tribune (January 12, 2005), Exhibit US-310, p. 3.
[3990] Tim Sommer et al., Composite Technologies, November 2006, Exhibit EC-14 (BCI), pp. 30, 64-67.
[3991] Boeing Bets Big On A Plastic Plane, Chicago Tribune (January 12, 2005), Exhibit US-310, p. 3.
[3992] These are large cylindrical, collapsible mandrels that have the shape of each fuselage section; Affidavit of Alan Miller, Exhibit US-1258, para. 12.
[3993] Affidavit of Alan Miller, Exhibit US-1258, para. 12.
[3994] Affidavit of Alan Miller, Exhibit US-1258, para. 14.
[3995] Bair Affidavit, Exhibit US-7, paras. 49, 57; Affidavit of Alan Miller, Exhibit US-1258, para. 11. According to Boeing's Michael Bair, this material was originally developed and certified for commercial aircraft production (i.e. to meet requirements relating to strength, heat resistance, toughness and stiffness) in May 1990.

24. In developing the 787, Boeing has shifted responsibility for detailed component design to suppliers, and focuses on systems integration, managing overall requirements, as well as the assembly process. The 787 is essentially assembled from large substructures designed and produced by suppliers. A number of suppliers are risk-sharing partners in the 787 programme, responsible for their own development and production costs and, in some instances, contribution of funds toward overall development and certification costs. Foreign suppliers, especially the Japanese heavy industrial companies and the Italian company Alenia, are reported to play a significant role in the 787 programme.[3996] Analysts' reports in 2007 estimated the development costs for the 787 to be between $7 and 9 billion, about half of which was to be provided by Boeing's risk-sharing suppliers.[3997] In particular, the three Japanese industrial corporations (Kawasaki Heavy Industries, Mitsubishi Heavy Industries and Fuji Heavy Industries), operating through the Japan Aircraft Development Corporation, are co-designing and building approximately 35 per cent of the 787.[3998] The Japanese government has been reported to have provided loans of up to $2 billion to finance the development project.[3999] The Italian government has also been reported to have provided infrastructure support to the Italian risk-sharing supplier, Alenia Aeronautica.[4000] Boeing has been reported as stating that a partner's ability to invest, reducing Boeing's upfront costs, was an important consideration in Boeing's selection of partners, as was the need to ensure engineering talent and technical capacity.[4001]

25. Completion of sub-assemblies and integration of systems takes place in Everett, Washington, with many components being pre-installed before delivery to Everett. The 787 composite wings are being manufactured by Mitsubishi Heavy Industries.[4002] The horizontal stabilizers are being manufactured by Alenia Aeronautica in Italy, and various parts of the fuselage sections are being built by Alenia in Italy, Vought in Charleston, South Carolina, Kawasaki Heavy Industries and Fuji Heavy Industries in Japan, Alenia in Italy and Spirit Aerosystems in Wichita, Kansas.[4003] The main landing gear and nose landing gear are being supplied by the French company Messier-Dowty, while passenger doors are being made by Latécoère in France, and the cargo, access and crew escape doors by Saab in Sweden.[4004] The integrated avionics platform is designed and supplied by Smiths/GE, while flight controls and other avionics systems are being supplied by Honeywell and Rockwell-Collins.[4005]

[3996] Dominic Gates, Boeing 787: Parts from around world will be swiftly integrated, The Seattle Times, 11 September 2005, Exhibit EC-114.

[3997] R. Aboulafia, Boeing 787 Dreamliner Program Briefing, World Military & Civil Aircraft Briefing, Teal Group, February 2007, Exhibit EC-1170.

[3998] Boeing shares work, but guards its secrets, The Seattle Times, 15 May 2007, Exhibit EC-1167.

[3999] Boeing shares work, but guards its secrets, The Seattle Times, 15 May 2007, Exhibit EC-1167.

[4000] Boeing shares work, but guards its secrets, The Seattle Times, 15 May 2007, Exhibit EC-1167.

[4001] Boeing shares work, but guards its secrets, The Seattle Times, 15 May 2007, Exhibit EC-1167, quoting Bob Noble, Boeing Vice President responsible for global partners on new programmes.

[4002] Dominic Gates, Boeing 787: Parts from around world will be swiftly integrated, The Seattle Times, 11 September 2005, Exhibit EC-114.

[4003] Dominic Gates, Boeing 787: Parts from around world will be swiftly integrated, The Seattle Times, 11 September 2005, Exhibit EC-114.

[4004] Dominic Gates, Boeing 787: Parts from around world will be swiftly integrated, The Seattle Times, 11 September 2005, Exhibit EC-114.

[4005] Bair Affidavit, Exhibit US-7, para. 64.

BCI deleted, as indicated **[***]**

D. ARGUMENTS REGARDING THE RELATIONSHIP BETWEEN THE AERONAUTICS R&D MEASURES AND BOEING'S DEVELOPMENT OF 787 TECHNOLOGIES IN SPECIFIC TECHNOLOGY AREAS

26. This section of the Appendix sets forth the parties' specific arguments concerning the relationship between work that Boeing performed pursuant to the aeronautics R&D measures and Boeing's development of technologies in the six specific technology areas for application to the 787.

1. Composites technologies, primarily the design, development and manufacturing of 787 composite fuselages and wings

(a) European Communities

27. The European Communities alleges that, pursuant to the NASA's ACT, AST and R&T Base programmes, NASA provided funding and support to Boeing through several contracts regarding composites research.[4006] In addition, the European Communities contends that Boeing learned about composites technologies relevant to the 787 composite fuselage by participating in a number of projects under DOD RDT&E programmes such as the ManTech Composites Affordability Initiative, the ManTech Advanced Fiber Placement project, DUS&T High Rate Fiber Placement project, V-22 Aft Fuselage Demonstration Program, and JSF prototype development programme.[4007] According to the European Communities, "*{b}ut for* these US Government composites R&D programmes, Boeing would not be able to build and promise deliveries of such an advanced 787 aircraft today. Nor would customers be as willing to buy it."[4008]

28. The European Communities identifies the following characteristics of the construction of the 787 fuselage as "deriving" from knowledge and experience that Boeing gained by participating in U.S. government R&D programmes:

(a) manufacture of the forward section of the 787 fuselage using Automatic Fibre Placement (AFP) and the centre fuselage sections of the fuselage using Automatic Tape Laying (ATL);

(b) production of all of the 787 fuselage sections as 360º barrel sections which are produced on large, rotating, collapsible mandrels and the design of the mandrels with notches for "co-cured" stringers[4009];

(c) the use of resin infused braided fibres to manufacture the frames, which are then bolted to the fuselage skins; and

(d) the design of the cut-outs in the fuselage frames using the same process as on the ATCAS panel.[4010]

[4006] European Communities' first written submission, Annex C, para. 26: NASA Contract NAS1-18889 regarding Research and Development in Advanced Technology Composite Aircraft Structures, 12 May 1989, Exhibit EC-329; NASA Contract NAS1-18954 regarding Advanced Composite Fabrication and Testing, 29 August 1989, Exhibit EC-798; NASA Contract NAS1-19349 regarding Structures and Materials Technology for Aircraft Composite Primary Structures, 30 September 1991, Exhibit EC-799; NASA Contract NAS1-20553 regarding Technology Verification of Composite Primary Fuselage Structures for Commercial Transport Aircraft, 25 September 1995, Exhibit EC-334; NASA Contract NAS1-99070 regarding Structures and Materials Technology for Aerospace Vehicles, 25 January 1999, Exhibit EC-800.

[4007] European Communities' first written submission, Annex C, para. 46.

[4008] European Communities' first written submission, Annex C, para. 22. Emphasis in original.

[4009] European Communities' first written submission, Annex C, para. 44.

BCI deleted, as indicated **[***]**

29. The European Communities identifies the following characteristics of the 787's composite wings as deriving from U.S. government-supported aeronautics R&D programmes:

(a) Boeing's decision to manufacture the entire wing box (i.e. the wing skins and spars) of the 787 from composite materials as large one-piece structures, which the European Communities alleges stems primarily from the knowledge and experience that Boeing (and McDonnell Douglas prior to its merger with Boeing) gained under NASA's ACT and AST programmes[4011];

(b) Boeing's decision to use ATL techniques for the construction of the wing box, which the European Communities alleges stems primarily from the knowledge and experience that Boeing (and McDonnell Douglas prior to its merger with Boeing) gained under NASA's ACT and AST programmes, as well as DOD RDT&E funding on a number of military aircraft programmes[4012];

30. The European Communities argues that U.S. government-supported research helped Boeing to develop some of the post-processing tools and techniques that it uses to machine the large composite parts for the 787. Its particular allegations are as follows:

(a) Specifications used by Boeing for aligning and drilling holes in multiple layers of composite materials in order to fasten the 787's wings to its fuselage derive from DOD-supported R&D that Boeing conducted for the B-2 programme[4013];

(b) Boeing employs "polycrystalline diamond tools" to drill its composite parts, while it explored similar diamond-coated rotating tools under the DOC ATP project on CVD Diamond-Coated Rotating Tools for Machining Advanced Materials[4014];

31. According to the European Communities, as a result of the knowledge and experience in advanced NDI techniques which Boeing obtained under NASA's ACT, AST and R&T Base programmes, as well as under DOD RDT&E programmes (including Materials, Advanced Materials for Weapons Systems, and Ageing Aircraft), Boeing has developed NDI techniques that it uses to detect faults in the composite fuselage and wing parts of the 787 after they have been shaped and cured.[4015]

32. In relation to Boeing's manufacture of the various fuselage sections of the 787 using AFP and ATL technologies, the European Communities alleges that Boeing studied the application of AFP and ATL techniques to the manufacture of large composite fuselage sections under NASA and DOD programmes, particularly the Advanced Technology Composite Aircraft Structures (ATCAS) element

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[4010] Joint Declaration by Dominik Wacht and Tim Sommer, Exhibit EC-1336 (BCI), para. 23; Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 71.

[4011] European Communities' first written submission, Annex C, paras. 56-57.

[4012] European Communities' first written submission,, Annex C, paras. 58-59. The military programmes in question include the F-22, A-6, B-2 and JSF programmes.

[4013] European Communities' first written submission, Annex C, para. 62.

[4014] European Communities' first written submission, Annex C, para. 63. Composite cutting is different from cutting metal because composites are not homogenous materials; rather, the matrix has different properties from the stronger reinforcement (which is much more difficult to cut). The use of conventional machining techniques to cut composites creates the potential for greater tool wear with significant heat generation, which can be damaging to the composite; Robert B. Aronson, "Cutting Composites," Manufacturing Engineering, March 2006, Exhibit EC-554, p. 2.

[4015] European Communities' first written submission, Annex C, para. 63.

of NASA's ACT Program.[4016] As discussed in paragraph 7.1713 of the Report, the formal ACT Program lasted from 1989 through 1995. Funding for advanced composites research related to a composite fuselage continued from 1996 to 2000 under the "Materials and Structures" element of NASA's R&T Base Program.[4017] The European Communities also alleges that knowledge and experience with respect to AFP and ATL techniques that Boeing gained through its participation in a number of DOD RDT&E programmes; most importantly, the ManTech Composites Affordability Initiative and Advanced Fibre Placement programmes, the DUS&T High Rate Fibre Placement project, the V-22 Aft Fuselage Demonstration Program and the JSF prototype development Program, "likely contributed to its decision to use AFP and ATL techniques to manufacture the 787's fuselage skin sections."[4018]

33. The European Communities argues that "the 360 degree barrel concept for the 787 fuselage sections also derives from Boeing's participation in NASA and DoD programmes."[4019] The European Communities acknowledges that, under ATCAS, Boeing designed, built and tested a fuselage from four separate *panel* sections (rather than 360º barrel sections). However, it contends that the research under ATCAS served as a "roadmap" for Boeing to arrive at the key solution that it later applied on the 787; namely, a composite fuselage barrel.[4020] According to the European Communities, "on the long road to Boeing's successful development of a composite fuselage barrel, ATCAS provided Boeing with quintessential foundational knowledge and technologies, by supporting the achievement of significant milestones in this long-term, step-by-step process."[4021] The European Communities notes that, under ATCAS, Boeing undertook several studies to substantiate the advantages of 360º sections.[4022] The European Communities asserts that there are in fact a number of reasons why 360º barrel sections are "more advantageous" than separate panels, "which Boeing likely learned from its experience in the ATCAS programme."[4023] The European Communities therefore contends that the knowledge and experience that Boeing gained from this ATCAS programme work "led to its ultimate selection of a full barrel concept with design features such as co-cured stringers".[4024] As for the

[4016] In a 1997 NASA Contractor Report, Boeing describes the ATCAS programme as having been initiated in 1989 as NASA Contract NAS1-18889, an integral part of the NASA sponsored ACT initiative. The report then describes Task 2 of Materials Development Omnibus Contract (NASA Contract NAS1-20013) which was awarded in 1993, as extending the ATCAS work. The report states that these two contracts addressed Phases A and B relating to concept selection and technology development. An additional contract (NASA Contract NAS1-20553, referred to as Phase C) was initiated to verify the technology at a large scale; L.B. Ilcewicz et al., Advanced Technology Composite Fuselage—Program Overview, NASA Contractor Report 4734, April 1997, Exhibit EC-808, para. 2-0. Airbus' Dominik Wacht also explains that the NASA contracts awarded to Boeing under the ACT Program were grouped together to form the ATCAS programme, which he alleges was aligned with Boeing's independent research efforts focused on the introduction of large scale composites on civil aircraft; Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 49.

[4017] NASA ACT Budget Estimates, FY 1989-FY 1997, Exhibit EC-321, at FY 1997, SAT 4-21.

[4018] European Communities' first written submission, Annex C, para. 46.

[4019] European Communities' first written submission, Annex C, para. 47.

[4020] European Communities' confidential oral statement at the second meeting with the Panel, para. 44.

[4021] European Communities' confidential oral statement at the second meeting with the Panel, para. 44.

[4022] European Communities' first written submission, Annex C, para. 47.

[4023] European Communities' first written submission, Annex C, para. 48. The European Communities identifies the most important of these advantages as (i) the fact that large composite barrels enable the manufacturer to reduce the number of parts to make the fuselage, substantially reducing cost and assembly time; and (ii) that the use of large barrels saves approximately 1,500 aluminium sheets and 40,000 – 50,000 fasteners, entailing a far less complex manufacturing process that reduces the need for human labour. The European Communities notes that Boeing itself considers that this translates directly into reduced manufacturing times of between 30 to 40 per cent; European Communities' first written submission, Annex C, para. 48.

[4024] European Communities' first written submission, Annex C, para. 47. The European Communities argues that the U.S. government aeronautics R&D subsidies in question enabled Boeing to confidently take the

influence of DOD military programmes on Boeing's decision to construct the 787 composite fuselage from 360º barrel sections, the European Communities argues that (i) Boeing gained knowledge and experience in using large, collapsible, rotating mandrels to build the 360º fuselage barrel sections through its participation in the V-22 and JSF programmes; and (ii) that Boeing's "ability to piece together the 360º composite barrel sections during final assembly was also "enhanced" by the work Boeing did under the V-22 programme in researching and conducting final assembly of a 360º composite aft fuselage section.[4025]

34. The European Communities argues that Boeing's decision to use braided resin infusion techniques for manufacturing the composite fuselage frames derives from work done under NASA's ACT Program.[4026] In particular, the European Communities contends that the research on resin-infused braided frames which Boeing carried out as part of the construction of the crown fuselage panel under the ATCAS Program, and its conclusion that this was the most cost efficient means of frame fabrication, "likely led to Boeing's decision to use resin-infused braided frames for the 787."[4027] In addition, the European Communities argues that Boeing's decision to bolt "mouse holed" composite fuselage frames to the fuselage skins of the 787 also derives from the knowledge and experience that Boeing gained under the ATCAS Program.[4028] The European Communities contends that the knowledge and experience that Boeing gained from the problems it encountered from the use of bonded (rather than bolted) frames when manufacturing the fuselage crown panel under the ATCAS Program "led to its ultimate decision to use mouse holed bolted frames on the 787."[4029] According to the European Communities, Boeing was able to "optimize" its mouse holed design through its work under the ACT Program.[4030]

35. Finally, the European Communities alleges that the "door and window reinforcements on the ATCAS Program were integrated directly into the skin, similar to the 787 barrel."[4031]

36. The European Communities argues that a number of the technical characteristics of the 787's composite wings derive from R&D conducted under NASA's ACT and AST programmes (particularly the Innovative Composite Primary Structures (ICAPS) and composites elements of those programmes[4032]), as well as DOD RDT&E programmes.[4033] The European Communities notes that under the composite wing element of the AST Program, McDonnell Douglas tested a semi-span advanced composite wing.[4034] The manufacturing technology used for the construction of the semi-span composite wing fabricated and tested in the composite wing element of the AST Program was

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"last steps" at an acceptable level of risk and cost for the company; European Communities' non-confidential oral statement at the second meeting with the Panel, para. 44.

[4025] European Communities' first written submission, Annex C, paras. 49 and 50.

[4026] European Communities' first written submission, Annex C, para. 53.

[4027] European Communities' first written submission, Annex C, para. 53.

[4028] European Communities' first written submission, Annex C, para. 54.

[4029] European Communities' first written submission, Annex C, para. 54.

[4030] European Communities' first written submission, Annex C, para. 54.

[4031] Joint Declaration by Dominik Wacht and Tim Sommer, Exhibit EC-1336 (BCI), para. 23; Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 71.

[4032] The ICAPS element of the ACT Program was implemented as NASA Contract NAS1-18862 with McDonnell Douglas regarding Innovative Composite Primary Structures, 31 March 1989, Exhibit EC-331. When the ACT Program ended prematurely in 1995, funding for advanced composites research related to composite wings continued until financial year 1999 under the AST Program; NASA AST Budget Estimates, FY 1989 - FY 1997, Exhibit EC-357, at FY 1996, SAT 4-42.

[4033] European Communities' first written submission, Annex C, para. 56.

[4034] European Communities' first written submission, Annex C, para. 57.

stitched/resin film infusion (S/RFI)[4035], while Boeing used ATL technology to construct 787 composite wings. The European Communities argues that, even though Boeing and McDonnell Douglas used S/RFI techniques to manufacture the AST semi-span composite wing, "this experience nonetheless led Boeing to its ultimate design of the 787's composite wing box and its decision to use ATL to manufacture the 787's wing box components."[4036]

37. The European Communities argues that U.S. government-supported research has helped Boeing to develop some of the post-processing tools and techniques that it uses to machine the large composite parts for the 787. In particular, it alleges that (i) specifications used by Boeing for aligning and drilling holes in multiple layers of composite materials in order to fasten the 787's wings to its fuselage derive from DOD-supported R&D that Boeing conducted for the B-2 programme[4037]; (ii) Boeing employs "polycrystalline diamond tools" to drill its composite parts, while it explored similar diamond-coated rotating tools under the DOC ATP project on CVD Diamond-Coated Rotating Tools for Machining Advanced Materials[4038]; and as a result of the knowledge and experience in advanced NDI techniques which Boeing obtained under NASA's ACT, AST and R&T Base programmes, as well as under DOD RDT&E programmes (including Materials, Advanced Materials for Weapons Systems, and Ageing Aircraft), Boeing has developed the NDI techniques that it uses to detect faults in the composite fuselage and wing parts of the 787 after they have been shaped and cured.[4039]

(b) United States

38. The United States argues that, although the European Communities has sought to support its "technology effects" causation theory by pointing to similarities between research conducted under NASA and DOD R&D programmes and technology applied to the 787, for the bulk of the challenged programmes, the European Communities "does not even find a semblance of a connection to the 787."[4040] The United States argues that, even as regards the NASA R&D programme that the European Communities argues had the clearest relevance to the 787 – the Advanced Technology Composites Aircraft Structures (ATCAS) Program – most of the technologies studied under ATCAS are fundamentally different to the technologies used on the 787.[4041]

39. According to the United States, the generic technology concept that Boeing studied under the ATCAS contract was for a panelized fuselage section, which from a technological point of view, differs fundamentally from the seamless 360º barrel sections that Boeing has developed for the 787.[4042] In addition, the United States argues that the key (albeit limited) technology findings of the ATCAS Program were widely known throughout the aerospace engineering community long before Boeing began work on the 787.[4043] In relation to the specific links between knowledge and technologies developed under the ATCAS Program and technologies applied to the 787, the United States argues: (i) that only $26 million was disbursed to Boeing under the ATCAS contract; (ii) that the research done under the ATCAS contract (as acknowledged by Airbus' Wacht) did not relate to a single-barrel fuselage, but instead to four quadrant panelized fuselage sections; (iii) that three sections of the panelized fuselage concept studied under ATCAS were made using a mixed honeycomb core stiffened concept that is a very different technology to the solid laminate technology

[4035] Michael Karal, AST Composite Wing Program – Executive Summary, NASA/CR-2001-210650, March 2001, Exhibit EC-819, p. 1. This process involves stitching pre-woven dry material together with wing components such as stringers and spar caps, followed by introducing resin just before curing in the autoclave.
[4036] European Communities' first written submission, Annex C, para. 52.
[4037] European Communities' first written submission, Annex C, para. 62.
[4038] European Communities' first written submission, Annex C, para. 63.
[4039] European Communities' first written submission, Annex C, para. 63.
[4040] United States' confidential oral statement at the second meeting with the Panel, para. 22.
[4041] United States' confidential oral statement at the second meeting with the Panel, para. 24.
[4042] United States' confidential oral statement at the second meeting with the Panel, para. 24.
[4043] United States' confidential oral statement at the second meeting with the Panel, para. 25.

used on the 787; and (iv) that the one panel studied under ATCAS that was designed using co-cured solid laminate technology which is similar to the 787 fuselage (the ATCAS crown panel) was constructed in a different way to the 787 fuselage sections.[4044]

40. According to the United States, because of the clear differences between ATCAS and 787 technologies, the only similarity between technologies developed under the ATCAS Program and those applied to the 787 is the co-cured hat stringer used on both the ATCAS crown panel and the 787 fuselage. However, the United States contends that there are significant differences in stringer formation, co-curing methods and load requirements between the two. Specifically, the United States alleges that the ATCAS research was limited to panel sections using only constant gauge stringers, while Boeing had to invent and design methods for creating multi-gauge stringers to manage the changing loads over the length of the 787 composite fuselage.[4045]

41. The United States denies that the composite wing developed by Boeing for the 787 was in any way enabled by the research that Boeing and McDonnell Douglas conducted under the NASA R&D programmes. The United States contends that the scope of the NASA composite wing work was very limited, in that it focused on structural issues, but did not fully address the systems integration for pumps, sensors, electrical and thermal integration required for a commercial aircraft design. Moreover, the United States notes that the composite wing designed and tested under the ICAPS element of the NASA ACT Program and then under NASA's AST Composite Wing Program used stitching and resin infusion technologies that were not commercialized by Boeing or McDonnell Douglas, while the 787 composite wings are made using ATL technology.[4046] Finally, the United States alleges that Boeing shared any valuable learning that arose from the NASA composite wing work with visiting personnel from BAE Systems and the U.K. Department of Trade and Industry (DTI) in 1996, which resulted in DTI initiating a carbon wing demonstration project (in which Airbus participated), using a very similar stitched approach for designing and manufacturing.[4047]

42. In relation to the European Communities' allegations concerning composites manufacturing tools and processes, the United States argues that the composite maintenance and repair processes for the 787 are based on those developed for use on the 777 composite structures and that their development preceded the work that was done under the ATCAS contract.[4048] According to the United States, material selection for the 777 (and later, for the 787) necessitated the development of a repair concept to accommodate that particular material. Moreover, the United States contends that repair concepts in general are widely known and relatively uniform within the aerospace industry, because airlines that own aircraft from multiple manufacturers must be able to efficiently maintain and repair their entire fleet. In this regard, the United States asserts that the "familiarity" of the bolted repair techniques selected for the 777 and 787 which makes them attractive to airlines is in fact a

[4044] United States' comments on European Communities' response to question 87, para. 21. Specifically, the United States explains that the ATCAS crown panel was built as a standalone section using outer mould line (OML) tools and inner mould line (IML) cauls to co-cure the skin and stringers, while the 787 fuselage, by contrast, is being built as a single solid piece of composite created and cured around enormous multi-section mandrels which are IML tools (designed by suppliers for Boeing) with OML cauls.

[4045] United States' comments on European Communities' response to question 87, para. 330; Airbus engineers Sommer and Wacht have responded that the fact that the 787 fuselage features multi-gauge stringers, rather than the constant-gauge stringers developed under ATCAS is irrelevant. They contend that the ATCAS structure established basic design data which can then be used to design actual aircraft fuselage sections in which stringer and panel thickness can be adapted to the actual load requirements of each part of the fuselage. According to Sommer and Wacht, the design data established during tests of the ATCAS panel sections *enables* this adaptation; Joint Declaration by Dominik Wacht and Tim Sommer, Exhibit EC-1336 (BCI), para. 23, footnote 44.

[4046] Bair Affidavit, Exhibit US-7, para. 55; Affidavit of Branko Sarh, Exhibit US-1254, para. 13.

[4047] Bair Affidavit, Exhibit US-7, para. 55.

[4048] Affidavit of Alan Miller, Exhibit US-1258, para. 19.

familiarity borne of their origin in use on metallic structures, not studies done with airlines under the ATCAS contract.[4049]

43. With respect to links to DOD-funded aeronautics R&D, the United States argues that military technologies are not technologically geared toward commercial aircraft production and design, and that in any case, that Boeing's policy is not to use ITAR-controlled defence technologies on the 787.[4050]

2. More-electric systems architecture

(a) European Communities

44. The European Communities argues that the knowledge, experience, and confidence Boeing gained through (i) the NASA AST Program, in particular, the Power-by-Wire (PBW) subtask of the Fly-by-Light/Power-by-Wire (FBL/PBW) element of that programme; and (ii) the Aerospace Propulsion and Power Technology, and Dual Use Science and Technology programmes under DOD's RDT&E Program, allowed Boeing to develop and use extensive "more-electric" systems on the 787, while maintaining certain efficient hydraulic systems. The European Communities argues that without this more-electric architecture, Boeing would not have been able to obtain the efficiencies and operating cost savings it now guarantees 787 operators, which contribute significantly to the commercial success of the 787.[4051] The European Communities argues that, in addition to any direct application of U.S. Government-supported more-electric technologies on the 787, Boeing's development of the final more-electric architecture of the 787 "surely benefited from the knowledge, experience, and confidence it gained under these programmes."[4052]

45. With respect to the FBL/PBW element of the AST Program, the European Communities argues that McDonnell Douglas gained knowledge and experience with regard to power system definitions and requirements through a NASA contract by designing, fabricating, testing, and demonstrating power management and distribution architectures, electrical actuators, and starter/generators.[4053] The European Communities argues that this knowledge and experience contributed to Boeing's design and development of the more-electric architecture of the 787, particularly as regards Boeing's ability to integrate more-electric components into the 787. According to the European Communities, Boeing's integrative capabilities likely benefited from the knowledge and experience McDonnell Douglas gained under the AST Program with respect to flight actuator designs.[4054] In addition, the European Communities asserts that **[***]**, the 787 will utilize electro-mechanical actuators akin to those that McDonnell Douglas studied and developed pursuant to its PBW contract.[4055]

[4049] Affidavit of Alan Miller, Exhibit US-1258, para. 20.

[4050] United States' first written submission, paras. 163-176 and 951-953; Bair Affidavit, Exhibit US-7, paras. 5, 23-32; United States' second written submission, paras. 55-59.

[4051] European Communities' first written submission, Annex C, para. 77.

[4052] European Communities' first written submission, Annex C, para. 77.

[4053] European Communities' first written submission, Annex C, para. 71; NASA Contract NAS3-27018 with McDonnell Douglas Aerospace regarding Power-By-Wire Development and Demonstration for Subsonic Civil Transport, 29 September 1993, C-5, Exhibit EC-826. Power-by-Wire Development and Demonstration for Subsonic Civil Transport, Exhibit EC-366.

[4054] European Communities' first written submission, Annex C, para. 71. Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 105-106; Boeing Presentation #16, Exhibit EC-807 (BCI), p. 3; Power-by-Wire Development and Demonstration for Subsonic Civil Transport, Exhibit EC-366.

[4055] Power-by-Wire Development and Demonstration for Subsonic Civil Transport, Exhibit EC-366.

46. The European Communities argues that a number of specific aspects of the 787's more-electric architecture derive from knowledge and experience that Boeing gained from dual-use research that it conducted pursuant to the Aerospace Propulsion and Power Technology, and Dual Use Science and Technology programmes under DOD's RDT&E Program. In this regard, the European Communities argues first, that Boeing's use of electrically actuated brakes on the 787 stems from its "existing military experience."[4056] According to the European Communities, this experience consists, *inter alia*, of work that McDonnell Douglas performed pursuant to a 1992 contract with the United States Air Force with regard to Electrically Actuated Brake System ("ELABRAT") technology.[4057] Second, the European Communities argues that Boeing's decision to maintain and improve certain hydraulic systems, thereby making the 787 a "more-electric" (as opposed to all-electric) aircraft, also stems from its dual-use DOD-supported military aircraft research. The European Communities explains that the 787 maintains some hydraulic actuation, but uses an innovative 5,000 psi operating pressure, as opposed to the 3,000 psi on older Boeing LCA like the 777[4058] and argues that this is precisely the same concept that Boeing studied, developed, and used for its DOD-funded JSF demonstrator. The European Communities indicates that, unlike Lockheed Martin, which used electro-hydrostatic actuators for its JSF concept, Boeing used a 5,000 psi hydraulic system because "modern 5,000-psi hydraulics systems compare better than EHAs in terms of cost, weight and supportability."[4059]

(b) United States

47. The United States argues that Boeing's decision to use a more-electric architecture for the 787 became possible because of a critical Boeing design innovation as well as supplier innovations.[4060] According to the United States, by using larger starter generators supplied by Hamilton Sundstrand, Boeing and its suppliers have been able to design non-pneumatic systems aimed at fuel and energy efficiency to power the aircraft's de-icing system, air conditioning and electronically-actuated brakes.[4061] The United States argues that the most significant developments with respect to more-electric technology in the 787 are the "no-bleed" environmental control system (e.g. air conditioning), supplied by Hamilton Sundstrand and the anti-ice/de-ice system, supplied by Ultra Electronics Holdings and GKN Aerospace.[4062] In addition, the United States notes that the electro-mechanical actuators used in the spoilers are supplied by Smiths, the primary flight control actuation system (both the hydraulic and electric elements) is supplied by Moog, and the electrically-actuated brakes are supplied by Goodrich and Messier-Bugatti.[4063] Moreover, according to the United States, these companies all provide similar systems to Airbus.

48. The United States contends that the advances in electric motor technology that are the key to the more-electric aircraft are, in large part, due to increasing demand in a broad range of industries, and that both Boeing and Airbus are benefiting from the billions of dollars in technology investments

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[4056] European Communities' first written submission, Annex C, para. 75; Boeing Presentation #3, Exhibit EC-353 (BCI), pp. 5-7.

[4057] Air Force Contract F33615-92-C-3406 with McDonnell Douglas Corporation regarding Electrically Actuated Brake System (ELABRAT), 29 September 1992, Exhibit EC-827; Boeing Presentation #16, Exhibit EC-807 (BCI), p. 9; Boeing Presentation #3, Exhibit EC-353 (BCI), p. 9.

[4058] Boeing Presentation #3, Exhibit EC-353 (BCI), pp. 5-7; Boeing Presentation #16, Exhibit EC-807 (BCI), pp. 6-8; Boeing Presentation #18, Exhibit EC-823 (BCI), p. 3.

[4059] European Communities' first written submission, Annex C, para. 76; James W. Ramsey, "Power-by-Wire," Avionics Magazine, 1 May 2001, Exhibit EC-828.

[4060] United States' first written submission, para. 941.

[4061] United States' first written submission, para. 941; Bair Affidavit, Exhibit US-7, para. 53; Joseph Ogando, "Boeing's 'More Electric' 787 Dreamliner Spurs Engine Evolution", Exhibit US-314.

[4062] Bair Affidavit, Exhibit US-7, para. 58.

[4063] Bair Affidavit, Exhibit US-7, para. 58.

being made for applications such as hybrid cars, electric trains and efficient power generation and distribution methods for commercial and residential power.[4064]

49. The United States argues that Boeing's switch to more-electric systems has also been driven by another key supplier innovation, namely, the "no-bleed" engine, which is available through engine makers GE and Rolls Royce.[4065] The United States asserts that the new engine technology accounts for at least one-third of the increased operating cost efficiencies of the 787, and that Airbus will benefit from supplier engine experience on the 787 as it has selected Rolls Royce to provide the Trent XWB engine series for the A350XWB.[4066]

50. As regards the European Communities' allegations concerning knowledge and experience that Boeing obtained from McDonnell Douglas' work under the FBL/PBW element of the AST Program, the United States asserts that the FBL/PBW subtask was terminated before any new technology related to advanced power management and distribution systems was built and tested, and that in any case, the flight controls developed by Boeing for the 787 are not the same as the electronic actuation technology that was originally envisioned under that terminated programme.[4067] In relation to Boeing's use of a 5,000 psi hydraulic system that the European Communities alleges is the same concept that Boeing studied, developed, and used for its DOD-funded JSF demonstrator, the United States asserts that the first 5,000 psi hydraulic system used in a commercial aircraft was actually designed and supplied by Eaton for the Airbus A380.[4068]

3. Open systems architecture

(a) European Communities

51. The European Communities argues that the open systems architecture on the 787 likely benefited from the knowledge and experience that McDonnell Douglas gained pursuant to a 1996 contract on the VMS Integrated Technology for Affordable Life Cycle Cost ("VITAL") program under DOD's Technology Reinvestment Project. The European Communities indicates that work pursuant to this contract aimed to reduce the Life Cycle Cost (LCC) of current and future military *and commercial* aircraft by developing the necessary building blocks for an open and affordable Vehicle Management System (VMS). The European Communities indicates that under this contract, McDonnell Douglas, *inter alia*, "define{d} generic VMS open architecture specifications," worked on interface standards, and demonstrated "plug and play" interchangeability.[4069]The European Communities argues that these are key elements of the 787's open systems architecture.[4070] The European Communities notes that the contract stipulates that "the VITAL team shall perform a research and development program designed to *develop and mature* the affordable Vehicle Management System technologies …. {T}he principal purpose of this agreement is for the VITAL Team to provide its *best research efforts in the support and stimulation of advanced research and*

[4064] Bair Affidavit, Exhibit US-7, para. 59; Joseph Ogando, "Boeing's 'More Electric' 787 Dreamliner Spurs Engine Evolution", Exhibit US-314.

[4065] United States' first written submission, para. 941; Bair Affidavit, Exhibit US-7, para. 58.

[4066] United States' first written submission, para. 941; "Fully Optimised for the Airbus A350XWB family", Rolls-Royce.com, Exhibit US-316.

[4067] Bair Affidavit, Exhibit US-7, para. 62.

[4068] Bair Affidavit, Exhibit US-7, para. 61.

[4069] Navy Contract N00019-96-H-0118 with McDonnell Douglas Corporation, Statement of Work, Exhibit EC-830, pp. 1-2.

[4070] Boeing Presentation #3, Exhibit EC-353 (BCI), p. 13; Passing the Value Test: The Boeing Technology Advantage, Boeing Point-to-Point, June 2006, Exhibit EC-784.

technology development and not the acquisition of property or services for the direct benefit or use of the Government."[4071]

52. The European Communities also argues that the open systems architecture on the 787 likely benefited from dual-use research Boeing conducted pursuant to the JSF Program. The European Communities explains that open systems architecture was in fact an emphasis of the JSF Program from the very beginning, and that Boeing successfully implemented an open systems architecture on its JSF design.[4072] The European Communities asserts that Boeing specifically studied integrating avionics into a core processor that utilizes open architecture as part of its DOD-supported JSF development programme and that this experience likely contributed to its ability to utilize open systems architecture on the 787.[4073] Relying on a statement by a Boeing official in a press report, the European Communities asserts that Boeing would *not be as far ahead on many of its programs* without the experience gained on the JSF program and the many technologies and processes developed and validated on it, such as open systems architecture.[4074]

53. Finally, in response to the United States' argument that components were purchased by suppliers, the European Communities argues that for the common core of the 787's open system architecture, Boeing still retains the overall integration responsibility.[4075]

(b) United States

54. The United States argues that the open systems architecture of the 787 is based on Boeing's decision to rely on supplier technical expertise in identifying the best systems for the aircraft. The United States indicates that the common core of this system, an integrated common data network that runs the aircraft's systems, is provided by Smiths/GE, in partnership with Rockwell Collins and Honeywell. According to the United States, the fiber optic Ethernet system used to run the 787's central processing is not only available commercially, but a version of it has been designed by Rockwell Collins for use on the A380's Integrated Modular Avionics system, a data network that relies on separate computers rather than on a central core.[4076] Finally, the United States asserts that the "plug-in" elements are available on the market, such as the integrated standby flight display purchased from Thales and the flight control electronics purchased from Honeywell.[4077]

[4071] European Communities' first written submission, Annex C, para. 184. Navy Contract N00019-96-H-0118 with McDonnell Douglas Corporation, 15 May 1996,Exhibit EC-830, p. 3. Emphasis added.

[4072] JSF X-32 and X-35, International Air Power Review, Volume 1 (2001), Exhibit EC-455, pp. 60-61; John D. Morocco, "Admiral Believes Navy JAST Also Could Fill USAF Need," Aviation Week and Space Technology, 24 April 1995, Exhibit EC-831, p. 22; Air Power for the 21st Century, Boeing Photo Release, 25 February 2000, Exhibit EC-832.

[4073] Boeing Demonstrates JSF Avionics Multi-Sensor Fusion, Boeing News Release, 9 May 2000, Exhibit EC-833.

[4074] William Cole, "The value of lessons learned," Boeing Frontiers Online, December 2003/January 2004, Exhibit EC-464, quoting Frank Statkus, former JSF Program Manager. Emphasis added.

[4075] Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), para. 21, citing Boeing 787: Integration's Next Step, Avionics Magazine, 1 June 2005.

[4076] Unites States' first written submission, para. 941 citing James W. Ramsey, "Integrated Modular Avionics: Less is More," Avionics Magazine (Feb. 1, 2007), Exhibit US-321.

[4077] Unites States' first written submission, para. 94; Bair Affidavit, para. 64.

BCI deleted, as indicated **[***]**

4. Enhanced aerodynamics and structural design

(a) European Communities

55. The European Communities argues that, through participating in four NASA aeronautics R&D programmes, namely HPCC (CAS project), AST (IWD project), HSR and R&T Base programmes, Boeing *used* and *enhanced* CFD codes, in particular OVERFLOW and TRANAIR. More specifically, the European Communities argues that, under the CAS project that was part of the HPCC Program, the OVERFLOW CFD code, which was originally developed by NASA, was further enhanced.[4078] TRANAIR was developed by Boeing under a contract that precedes the existence of the NASA R&D programmes at issue in this dispute. The European Communities' arguments therefore focus on the contributions to the design of the 787 arising out of NASA contracts under which the TRANAIR code was enhanced.

56. According to the European Communities, the research carried out under the IWD project (AST Program) resulted in the capability to develop highly optimized, high performance wings at substantially reduced development time and cost.[4079] The European Communities argues that under the Airframe Technology contract awarded to Boeing in 1994 as part of the HSR Program, Boeing further refined CFD methods, including enhancing TRANAIR and integrating OVERFLOW into the overall design process.[4080] Finally, although the R&T Base Program was of a more general nature than the other NASA programmes, spanning a wide array of technical domains, the European Communities argues that this programme nevertheless provided the basic scientific and engineering understanding underpinning further enhancements of the CFD and design codes.[4081]

57. According to the European Communities, this led to direct application of the codes in the design process for the 787 and also provided Boeing employees with "knowledge, experience and confidence", which "surely benefited" the final aerodynamic and structural design of the 787.[4082] In this regard, the European Communities submits that, as well as gaining the "explicit knowledge", or the "tangible data…recorded in…software codes", Boeing also accrued "tacit knowledge" as a result of its work on the CFD codes.[4083] According to the European Communities, only when experienced personnel use the CFD codes in an appropriately integrated manner in the overall design process, will the design cycle time reductions promised by CFD codes be achieved.

58. The European Communities argues that Boeing applied the knowledge and experience that it gained with respect to computer-assisted design and manufacturing tools from DOD supported dual-use research to the 787.[4084] In this regard, the European Communities submits that Boeing developed "advanced 3-D modelling and simulation techniques under the F-22 programme" and that these techniques "became the basis for the Computer-Aided Three-Dimensional Interactive Application ("CATIA") design and manufacturing tools, which Boeing is now making use of in designing and

[4078] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 142, 145.
[4079] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, pp. 85-87.
[4080] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 112.
[4081] Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC-15, p. 145.
[4082] European Communities' first written submission, Annex C, para. 99.
[4083] Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), para. 32.
[4084] European Communities' first written submission, Annex C, para. 90.

building the 787".[4085] The European Communities also alleges that the 787 team is using the same CATIA-based digital design approach as Boeing used in designing the JSF demonstrator.[4086]

59. In response to the United States' argument that the CATIA software was developed by, and is commercially available from, the French company Dassault, the European Communities argues that Boeing gained "tacit and explicit knowledge" regarding "which design tool should be used in which way, by whom, and at which step of the design process".[4087] The European Communities argues that under certain DOD RDT&E programmes (JSF and F-22), Boeing gained experience regarding how to use the CATIA software and how to integrate it into the design process, which Boeing then applied to the 787 design and assembly process.

60. The European Communities argues that NASA funding and support under the IWD project of the AST Program provided Boeing with the ability and confidence to integrate the aerodynamic, structural and systems design aspects of the design of a wing in order to reduce design cycle time and cost, while at the same time improving the wing's aerodynamics and structural design.[4088] The European Communities also argues that (i) the hydraulically actuated drooped spoilers on the 787 are "precisely the same concept that Boeing used on the C-17, a programme for which Boeing received billions of dollars in dual-use funding from DOD"; (ii) the "slimmer wings" used on the 787 arise out of NASA and DOD composites R&D programmes; and (iii) the simplified trailing edge for the 787's wings is the result of a combination of improved CFD tools and the integrated design techniques developed under the IWD project.[4089]

(b) United States

61. The United States argues that the cornerstone of the efficiency gains achieved under the 787 programme is Boeing's extensive use of digital data which was achieved in partnership with the French supplier, Dassault.[4090]

62. The United States argues that the CFD codes enhanced under the NASA programmes "are not the same codes that Boeing uses in its product design process".[4091] Rather, the NASA codes are generic CFD codes that are publicly available. The United States argues that Boeing was required to enhance the generic codes so that they would "fit its own product design processes".[4092] Moreover, the United States asserts that the versions of TRANAIR that Boeing developed with NASA funds are publicly available, and that it has been possible to commercially license the TRANAIR code since 2004.[4093] According to the United States, OVERFLOW was developed by NASA alone, is widely used by both NASA and industry and can be commercially licensed. The United States also denies that OVERFLOW was developed or enhanced under any contract between Boeing and NASA.

[4085] European Communities' first written submission Annex C, para. 90.

[4086] European Communities' first written submission, Annex C, para. 90.

[4087] Statement by Patrick Gavin, Tim Sommer, Burkhard Domke, and Dominik Wacht, 8 November 2007, Exhibit EC-1175 (BCI), paras. 39-40.

[4088] European Communities' first written submission, Annex C, para. 92; Dominik Wacht, An Analysis of Selected NASA Research Programs and Their Impact on Boeing's Civil Aircraft Programs, November 2006, Exhibit EC15, pp. 94-98.

[4089] European Communities' first written submission, Annex C, paras. 96-98.

[4090] Bair Affidavit, Exhibit US-7, para. 18.

[4091] United States' non-confidential oral statement at the second meeting with the Panel, para. 22.

[4092] United States' non-confidential oral statement at the second meeting with the Panel, para. 22.

[4093] United States' comments on the European Communities' response to question 87, para. 327; US Department of Defense Website, DOD 101, An Introductory Overview of the Department of Defense, "What We Do", Exhibit EC-1234, p. 4.

63. The United States denies that the R&D work that Boeing performed under NASA's HSR Program and the IWD element of the AST Program is linked to the technologies developed for the 787. According to the United States, the HSR Program was aimed at developing concepts for a supersonic passenger aircraft, and the results of such research have no applicability to the challenges of designing the 787, which is a subsonic aircraft that flies under very different conditions, and accordingly, is designed with a different fundamental structure to the high speed civil transport aircraft studied under the HSR Program.[4094] In relation to the use of CFD codes as part of the IWD element of the AST Program, the United States acknowledges that one CFD code used under the IWD contract demonstrated a slight improvement in design time, and was disseminated to industry, but contends that Boeing subsequently invested its own funds outside of the contract to achieve an additional significant time reduction relative to the time reduction achieved under the IWD contract.[4095] Moreover, the United States argues that the reduction in design cycle time related to the code does not affect the overall 787 development cycle because it is not in the critical path sequence of work that determines the total development cycle time for the aircraft.[4096]

64. The United States agrees with the European Communities that the computer-aided design and manufacturing tools used on the 787 are fundamental to the improvements in the design process for the 787.[4097] However, the United States contends that these tools are a commercially available suite of technologies, the Product Lifecycle Management Tools (including CATIA, DELMIA, ENOVIA and SMARTEAM), which are purchased from Dassault, and that Airbus France has purchased and implemented the same technology from Dassault.[4098]

65. The United States agrees with the European Communities as to the importance of integration skills, and specifically, the proposition that it is the ability to define and manage the complex interaction of design processes, organization and tools so as to enable the development and manufacture of an aircraft at minimum time and cost that is one of the core competencies of an aircraft manufacturer.[4099] However, the United States disputes the contention that Boeing performs better as an integrator of commercial technologies and products because of its experience as an integrator on military projects; it asserts that such a contention is at odds with the views of most DOD analysts who consider that DOD should learn more from commercial enterprises, rather than vice-versa.[4100] The United States argues that in any case, Boeing's integration knowledge develops from its role as a prime contractor on most of its DOD *systems production* contracts, and from NASA contracts with Boeing related to the space shuttle, both of which are outside the scope of the aeronautics R&D programmes challenged in this dispute.[4101]

66. The United States acknowledges that the fundamental structural design of a large commercial aircraft, notably its aerodynamic shape, is the primary responsibility of Boeing, notwithstanding that Boeing conducts much of the work on the 787 in conjunction with suppliers. However, the United States denies that the aerodynamic design of the 787 wing is the result of government funding.[4102] According to the United States, Boeing aerodynamicists review the same NASA-sponsored research as the rest of the world, but the most significant learning is the knowledge developed within the

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[4094] Affidavit of Douglas Ball, Exhibit US-1257, paras. 4, 7.
[4095] Bair Affidavit, Exhibit US-7, para. 67.
[4096] Bair Affidavit, Exhibit US-7, para. 67.
[4097] Bair Affidavit, Exhibit US-7, para. 26.
[4098] Bair Affidavit, Exhibit US-7, para. 26.
[4099] United States' second written submission, para. 203, referring to European Communities' confidential oral statement at the first meeting of the Panel, para. 14.
[4100] United States' second written submission, para. 204; Louis Rodriguez, Defense Acquisition: Improved Program Outcomes are Possible, Exhibit US-1151, p. 3.
[4101] United States' second written submission, para. 205.
[4102] Bair Affidavit, Exhibit US-7, para. 65.

company from over 80 years of commercial aircraft designing.[4103] Moreover, the United States argues that the IWD project explored initial wing design optimization on generic wing configurations, with little applicability to the specific 787 wing platform or airfoil development.[4104]

67. In response to the European Communities' arguments concerning the similarities between the high-lift system on the 787 and the C-17, including all of the elements required to power, actuate and monitor the flap and slat system, the United States argues that the connection is that the systems for both aircraft are designed and supplied by the supplier Smiths/GE, a supplier that also provides the high lift system for the Airbus A330, A340 and A380.[4105]

5. Noise reduction technologies

(a) European Communities

68. The European Communities argues that the knowledge, experience, and confidence Boeing gained from US Government-supported R&D, primarily through NASA's AST, QAT and Vehicle Systems programmes, accelerated Boeing's development of noise reduction technologies used on the 787.[4106] The European Communities argues that under the NASA R&D programmes, Boeing and McDonnell Douglas conducted research with respect to noise reduction technologies that are very similar to the noise reduction technologies on the 787.[4107] The noise reduction technologies in question include the following technologies, each of which the European Communities argues derives at least in part from NASA funding and support: (i) low weight structures, (ii) improved airplane performance, (iii) chevrons, (iv) joint-less acoustic treatment, (v) quiet flaps and slats, and (vi) low-noise landing gear.[4108] In addition, the European Communities argues that industry and NASA collaborated on two Quiet Technology Demonstrator (QTD) programmes to test the noise reduction technologies developed under the AST, QAT, and Vehicle Systems programmes.[4109] According to the European Communities, there is no question that these NASA-supported and QTD-tested technologies have benefited Boeing's development of the 787.[4110] The European Communities argues that, *but for*, the aeronautics R&D subsidies, Boeing would not be able to build such an environmentally-friendly 787 aircraft and customers would not be as willing to buy it.[4111]

69. The European Communities argues that Boeing has been able to develop and apply the noise reduction technologies on the 787 when it did because of the knowledge, experience, and confidence that it gained through participating in NASA's AST, QAT, and Vehicle Systems programmes. The European Communities contends that under these programmes, pursuant to a number of NASA contracts, Boeing and McDonnell Douglas conducted research with respect to such noise reduction technologies as scarfed inlets, chevron nozzles, swept and lean stators, advanced liner treatments, quiet high-lift systems, and quiet landing gear, all of which it alleges are very similar to the noise reduction technologies on the 787.[4112]

70. The European Communities also argues that Boeing's development of noise reduction technologies for the 787 has benefited from the testing of noise reduction technologies developed

[4103] Bair Affidavit, Exhibit US-7, para. 65.
[4104] Bair Affidavit, Exhibit US-7, para. 67.
[4105] United States' first written submission, para. 941; Bair Affidavit, Exhibit US-7, para. 68.
[4106] European Communities' first written submission, Annex C, para. 100.
[4107] European Communities' first written submission, Annex C, para. 102.
[4108] European Communities' first written submission, Annex C, para. 101.
[4109] "Boeing, Rolls-Royce Work On A Quieter Future For Commercial Aviation," Boeing News Release, 20 November 2001, Exhibit EC-387.
[4110] European Communities' first written submission, Annex C, para. 104.
[4111] European Communities' first written submission, Annex C, para. 100.
[4112] European Communities' first written submission, Annex C, para. 102.

under the AST, QAT and Vehicle Systems programmes that occurred pursuant to the two QTD programmes that were undertaken as a collaborative effort between NASA and industry, including Boeing. The European Communities asserts that, under the initial QTD Program, with NASA sponsorship, Boeing tested technologies such as chevrons and acoustic inlet liners,[4113] while under the QTD2 Program, which NASA funded in part through the QAT portion of its Vehicle Systems Program,[4114] Boeing tested additional technologies such as covered landing gears, redesigned chevrons including shape-memory alloys, and a new acoustic inlet liner for the front of the engine nacelles.[4115]

71. Finally, the European Communities argues that NASA's work in other technological areas have also had spill-over effects for noise reduction on the 787. First, the composite fuselage, which the European Communities alleges was developed with US Government assistance, provides increased sound attenuation when compared to comparable aluminium structures.[4116] Second, the CFD codes and integrated design concepts, which the European Communities alleges were used and enhanced through the aeronautics R&D subsidies, not only helped Boeing to enhance the aerodynamics and structural design of the 787, but also to reduce its noise.[4117]

(b) United States

72. The United States argues that the noise reduction technologies used on the 787 are largely the product of supplier technology, and as such, are available to Airbus.[4118] According to the United States: (i) the engine nacelle chevrons that will dampen engine noise are supplied by GE (as are the improved engines), and were actually first flight tested on an Airbus A321 aircraft; (ii) the joint-less inlet liners were developed and supplied by Goodrich, which is also an Airbus supplier; and (iii) the landing gear was developed and is being supplied by Messier-Dowty, a French company.[4119]

73. Moreover, the United States argues that the Quiet Technology Demonstrator project was an industry-led effort involving, among others, Boeing, GE and Goodrich. The United States asserts that Boeing has contributed its privately-funded noise database as well as its acoustic array facility for the testing and that the other participants have designed, built and installed their various technologies on an aircraft on loan from an airline for which it was destined, which was then flight-tested in order to generate full-scale data on these in-development technologies.[4120] Of the two tests that have occurred to date, the United States asserts that, while NASA participated in QTD1 in order to gain access to the generated data for use in the validation of its noise prediction codes, it contributed very little money.[4121] The United States contends that in QTD2, NASA "bought its way into the effort" in order

[4113] "Boeing, Rolls-Royce Work On A Quieter Future For Commercial Aviation," Boeing News Release, 20 November 2001, Exhibit EC-387.
[4114] Results of NASA Aircraft Noise Research, Exhibit EC-390.
[4115] Boeing Flight Test Journal, Future Looks Quiet, 20 September 2005, Exhibit EC-393; James Wallace, Boeing makes 'quiet' advances, Seattle-Post Intelligencer, 11 August 2005, Exhibit EC-389; James Wallace, Shhhh! Noise tests for planes in progress, Seattle Post-Intelligencer, 30 November 2005, Exhibit EC-394; Tad Calkins and Walter Polt, "Not so loud," Boeing Frontiers Online, March 2006, Exhibit EC-392; Jia Yu et al., Quiet Technology Demonstrator 2 Intake Liner Design Validation, AIAA 2006-2458, 8-10 May 2006, Exhibit EC-848; William H. Herkes, The Quiet Technology Demonstrator Program: Flight Validation of Airplane Noise-Reduction Concepts, AIAA 2006-2720, 8-10 May 2006, Exhibit EC-849.
[4116] John Gillie, An inch saved might mean an order earned for Boeing, The News Tribune (Tacoma, WA), 18 November 2005, Exhibit EC-338.
[4117] European Communities' first written submission, Annex C, para. 107.
[4118] United States' first written submission, para. 941.
[4119] Bair Affidavit, Exhibit US-7, para. 69.
[4120] Bair Affidavit, Exhibit US-7, para. 70.
[4121] Bair Affidavit, Exhibit US-7, para. 70.

to test certain technologies it had developed in partnership with supplier companies, including "toboggan" landing gear fairings developed with Goodrich.[4122]

6. Health management systems

(a) European Communities

74. The European Communities argues that the aeronautics R&D subsidies created, and accelerated the development and application of the health management systems, allowing Boeing to better monitor the health of different parts on the 787, lower maintenance costs on the 787, and provide improved maintenance service.[4123] In this respect, the European Communities refers to Boeing's "GoldCare" service, a comprehensive life-cycle management service through which Boeing offers fleet maintenance management and parts support, as well as services for the repair and overhaul of components.[4124] The European Communities argues that Boeing is able to provide GoldCare, in part, because of the integrated vehicle health management system of the 787 that was enabled by the aeronautics R&D subsidies.

75. The European Communities argues that Boeing gained knowledge and experience regarding health management technologies, as well as confidence in the application thereof, through its participation in U.S. government-supported aeronautics R&D programmes, and that this has enabled it to implement these technologies on the 787 so quickly.[4125] First, the European Communities argues that Boeing conducted research on health management technologies under the NASA R&T Base and Aviation Safety programmes.[4126] The European Communities has submitted various contracts that NASA awarded to Boeing to explore health management technologies.[4127] Second, the European Communities argues that Boeing developed health management technologies pursuant to a number of its DOD RDT&E contracts. The European Communities argues that research into health management and sensor technology conducted under a number of DOD RDT&E programmes has likely benefited the health management system on Boeing's 787. The European Communities refers to research conducted under the Aerospace Flight Dynamics/Vehicle Systems Program, the Aerospace Avionics/Sensors Program and the DUS&T Program. The European Communities argues that under these programmes, McDonnell Douglas and Boeing studied, developed, and patented technologies related to aircraft health monitoring and that Boeing developed techniques that improve damage assessment of advanced composite structures.[4128]

76. Finally, the European Communities argues that Boeing gained knowledge and experience with respect to advanced NDI techniques under a number of DOD RDT&E programmes, including the Materials, Advanced Materials for Weapons Systems Program, and the Aging Aircraft Program. The European Communities argues that working under these R&D programmes, Boeing gained the confidence to apply advanced NDI techniques for the health management of the 787. Further, the

[4122] Bair Affidavit, Exhibit US-7, para. 70.

[4123] European Communities first written submission, para. 1350. European Communities' first written submission, Annex C, paras. 110 - 121.

[4124] GoldCare – The 787 Revolution Now Revolutionizes Service, Boeing Website, Exhibit EC-852; "Ready for the upturn," Flight International, 10 January 2003, Exhibit EC-853. Boeing Presentation #20, Exhibit EC-854 (BCI), p. 1.

[4125] European Communities' first written submission, Annex C, para.114.

[4126] NASA Aviation Safety Budget Estimates, FY 2000, Exhibit EC-382, SAT 4.1-51.

[4127] NASA Contract NAS1-00106 with The Boeing Company regarding Flight Critical Systems Research, 2000, Exhibit EC-858, Section C.1, Article 2.3; NASA Contract NAS1-99070 with Boeing Commercial Airplane Group regarding Structures and Materials Technology for Aerospace Vehicles, 25 January 1999, Exhibit EC-800, p. 4; and US Patent No. 6,920,790, Exhibit EC-579.

[4128] European Communities' first written submission, Annex C, para.116 and European Communities' second written submission, para. 423; CRA RDT&E Report, Exhibit EC-7, Appendix A, pp. 15, 21-24.

European Communities argues that the sensors and other specific health management technologies researched pursuant to DOD-supported military aircraft R&D facilitate the use of NDI on the 787.[4129]

(b) United States

77. The United States argues that the 787 health management systems derive primarily from Boeing's own proprietary 777 technology, developed 15 years earlier and supplied by Honeywell.[4130] In addition, Boeing engineer Michael Bair explains that the on-board health management/crew information system on the 787 is a "plug-in" element of the "more electric" architecture.[4131]

78. Bair argues that the "Aircraft Health Monitoring services" that Boeing offers for the 787 is the same basic service that Boeing offers for all models of its aircraft. He alleges that the service was first developed in 1991/1992, and has been in production on both the 777 and 747 airplanes since 2004. According to Bair, the 787's health management system is more extensive simply because the "more electric architecture" allows for monitoring of more system components. Bair asserts that Boeing has not deployed Structural Health Monitoring capability on the 787 and that structural inspections for the 787 will be accomplished using normal visual inspection methods. According to Bair, the maintenance benefits that the 787 offers to airline customers are simply the result of meeting design requirements and validating these design requirements through a comprehensive testing program.[4132] Finally, Bair argues that the virtual "Crack Closure Technique" is commercially available through a company formerly known as ABACUS, now called Simulia, which is part of Dassault Systemes.[4133] He notes, in addition, that Boeing has no contracts under the Integrated Vehicle Health Management Program and that data generated from that project have, however, been made widely available, as was the data generated by the Flight Critical Systems Research Program.[4134]

[4129] European Communities' first written submission, Annex C, paras. 117-120.
[4130] United States' first written submission, paras. 937 and 941; Bair Affidavit; Exhibit US-7, paras. 71-74.
[4131] Bair Affidavit, Exhibit US-7, para. 71.
[4132] Bair Affidavit, Exhibit US-7, para. 72.
[4133] Bair Affidavit, Exhibit US-7, para. 73.
[4134] Bair Affidavit, Exhibit US-7, para. 74.

BCI deleted, as indicated **[***]**

Appendix VII.F.2: The Cabral Model

A. OVERVIEW

1. The purpose of this Appendix is to explain an economic model presented by the European Communities as part of its serious prejudice case and to evaluate key assumptions on which the model is based. The model is constructed by Professor Luís Cabral of the Stern School of Business at New York University.[4135] Professor Cabral states that his report seeks to address the question of how the provision of subsidies affects the business decisions of Boeing; specifically, how the receipt of an additional dollar of a particular category of subsidy affects the amount that Boeing chooses to invest in the development of new aircraft, and to price more aggressively.[4136] The category of subsidies the focus of Professor Cabral's analysis is what he calls "development subsidies". These are subsidies in which the amount of subsidy does not vary in direct proportion to the number of aircraft produced or sold.[4137]

2. Professor Cabral's analysis is based on a specific economic model of Boeing's behaviour; namely, that when Boeing receives so-called "development subsidies", management seeks to maximize a trade-off between shareholder income and shareholder value, with the result that it directs a certain portion of the subsidy towards dividends, and the remainder towards "investments that increase firm value."[4138] His conclusions about the types of activities that constitute "investments in firm value" are based on particular assumptions about the LCA markets; particularly the nature of LCA production and importance of learning curve efficiencies and switching costs, and the role played by product quality. As discussed further in Section B below, Professor Cabral's model of Boeing's investment behaviour is based on the underlying premise that Boeing's access to capital is constrained, and thus that Boeing's investment behaviour is sensitive to changes in its cash flow (e.g. the receipt of subsidies).

3. Professor Cabral's analysis is not a unified model of Boeing's pricing and investment behaviour, but rather, two separate models. This is not immediately obvious from the way that the analysis has been presented in this dispute, although it becomes clear once the Annexes to Professor Cabral's Report are examined in greater detail. Although we refer to the "Cabral model" in this Appendix, we describe the two models that comprise Professor Cabral's analysis separately. For ease of discussion, we refer to the two models that constitute Professor Cabral's analysis as the "Objective Function Model" and the "Price Competition Model".

4. The main purpose of the **Objective Function Model** is to obtain an estimate of the share of each additional dollar of subsidies that Boeing would devote to payments to shareholders, on the one hand, and to "investment" (in the form of "aggressive pricing of new LCA and mature LCA to new customers, and additional R&D), on the other. Professor Cabral concludes that the allocation would be 15 cents : 85 cents.

[4135] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, CEPR and New York University, March 2007, Exhibit EC-4.

[4136] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 1.

[4137] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 2-3. It appears that the category of subsidies that Professor Cabral refers to as "development subsidies" encompasses the same subsidies that the European Communities analyses as operating to increase Boeing's non-operating cash flows (as distinguished from the subsidies that the European Communities characterizes as reducing Boeing's marginal unit costs of production and sale of LCA).

[4138] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 5.

BCI deleted, as indicated **[***]**

5. The main purpose of the **Price Competition Model** is to determine Boeing's division of the 85 cents in every additional dollar of subsidies that it devotes to "investment" between the following three uses: (i) aggressive pricing of new models of LCA implied by learning curve efficiencies; (ii) aggressive pricing of mature aircraft through the phenomenon of buyer switching costs; and (iii) additional investments in R&D. Professor Cabral finds that, from 85 cents in the dollar that Boeing would "invest": 12 cents goes to aggressive pricing of new models due to the learning curve effect; 47 cents goes to aggressive pricing due to switching costs; and 26 cents goes to additional R&D. Due to the time profile of R&D investments (which Professor Cabral sees as representing future price reductions where price is considered the "effective price on a per-value unit basis"), the 26 cents in R&D investments result in a cumulated net present value of 40 cents when the time period 2007 to 2022 is taken into account.

6. Based on the above estimates, and on other calculations that are described in greater detail below, Professor Cabral calculates that the total of $19.1 billion in subsidies allegedly received by Boeing between 1989 and 2006 translates into the following "price effects", or price reductions per model of Boeing aircraft in 2004 – 2006:[4139]

Aircraft model	**Per-aircraft "price effect" ($ thousands)**			***Ad valorem* price effect (%)**		
	2004	**2005**	**2006**	**2004**	**2005**	**2006**
737 Family	1,009	879	949	2.59	2.47	2.64
747 Family	2,834	2,597	2,986	2.10	1.90	1.95
767 Family	1,443	1,248	1,354	1.78	1.70	1.81
787 Family	1,539	1,332	1,445	1.75	1.67	1.77
777 Family	2,324	2,010	2,169	1.72	1.62	1.72

B. THE OBJECTIVE FUNCTION MODEL

1. Structure and Mechanics of the Objective Function Model

7. The first model presented in the Cabral Report consists of Boeing's objective function. The main purpose of this model is to obtain an estimate of the share of each additional dollar of subsidies that would be devoted to total "investment" in aggressive pricing (in relation to both learning curve and switching cost effects) and in R&D. This value is found to be 85 cents.

[4139] Extracted from the Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 89, Table 7. The term "price effects" generally refers to the extent to which Boeing has been able to lower its LCA prices as a result of the subsidies. For example, see European Communities' first written submission, para 1306 where the European Communities submits that the subsidies that directly reduce the marginal unit costs of Boeing LCA "have a price effect commensurate with their amount… {e}ach of these subsidy dollars has the effect of reducing the price of a Boeing LCA by exactly $1" However, the European Communities also uses this term in a narrower sense, to refer to Professor Cabral's quantification of the extent to which subsidy dollars enable Boeing to directly and immediately "aggressively price" its LCA, based on his particular theory that equates all subsidies that are not tied to the production of additional units of LCA as fungible with cash (i.e. equivalent to additional non-operating cash to Boeing), and assumptions about the optimal investment strategy of a company like Boeing given the particularities of the LCA market (learning curve, switching costs etc.). For example, see European Communities' first written submission, para. 1332 and figures 22 and 23 (which are the same as the "price effects" calculations made by Professor Cabral in EC-4, Tables 7 and 8).

BCI deleted, as indicated **[***]**

8. Boeing maximizes its "utility" by choosing the optimal combination of dividend payments and investments in future value of the firm (which are the only two uses of funds permitted in the model). The maximization problem is constrained by the condition that dividends plus investment together cannot exceed cash flow from development subsidies and other sources of funds. Boeing's objective function is of the Cobb-Douglas type, where the parameter α specifies the relative "weight" that Boeing's shareholders attach to dividends, so that (1-α) is the weight attached to investments in future firm value.[4140] From the first-order condition for a maximum, Professor Cabral obtains α as an increasing function of (i) Boeing's internal rate of return on investment; and (ii) the ratio between dividends and firm value; two observable variables for which data can be obtained. The objective function is consistent with the assumption that increases in Boeing's cash flow will lead it to increase its level of investment. Professor Cabral notes that his framework depends on the assumption that Boeing's access to capital is constrained. If Boeing had unconstrained access to capital, then according to the Modigliani-Miller theorem, it could be assumed to always be investing at optimal levels. In this scenario, an increase in government subsidies would be entirely reflected in higher dividends, and would have no effect on Boeing's investment levels.[4141]

9. Having determined the respective weights of dividends and investment in Boeing's objective function, Professor Cabral subjects Boeing's utility maximization problem to the "cash flow constraint" that is partly determined by the amount of subsidies received. From this, he is able to calculate the marginal increase in investment for a given marginal increase in "development subsidies" (β) which is approximately 85 per cent.

10. Professor Cabral's calibration of the model parameters is as follows:

- To estimate the value of α (the relative weight that Boeing shareholders attach to dividends) Professor Cabral uses (i) data on Boeing's ratio of payments to shareholders, compared with firm value and (ii) an estimate of the internal rate of return on investment for Boeing. Professor Cabral calculates that ratio of payments to shareholders : firm value on the basis of Boeing's publicly reported annual payments to shareholders and its market capitalization. On the basis of publicly-available data, Professor Cabral calculates that Boeing distributed $14.74 billion to shareholders between 2000 and 2006 (in the form of dividend payments and repurchases of stock), which represents an average of $2.1 billion per year. In addition, Professor Cabral calculates that the average market capitalization of Boeing (i.e. Boeing's share price multiplied by the number of outstanding shares) between 2000 and 2006 was $43.59 billion. From these numbers, Professor Cabral calculates that Boeing's "dividend to value ratio" was 4.8 per cent.[4142] Professor Cabral estimates that Boeing's internal rate of return on investment is 10 per cent, which is not a figure derived from Boeing data, but rather, is a mid-range figure from a 1988 study estimating rates of return on R&D capital in the

[4140] Professor Cabral says that the virtue of the Cobb-Douglas functional form is that it embodies the concept of decreasing marginal returns. In other words, it embodies the phenomenon that the additional degree of shareholder satisfaction from dividend payments will decrease as dividend payments increase, and similarly, the additional degree of shareholder satisfaction from increases in firm value decreases as the level of firm value increases. Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 17-18.

[4141] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 22. The Modigliani-Miller theorem is a neo-classical model of firm investment behaviour in which firms make investments to the point that their return on investment equals the market rate. Their optimal investment level is independent of the way in which the investment is financed (e.g. through subsidies, borrowings, cash flow from operations etc.).

[4142] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 40.

transportation equipment industry.[4143] From these figures, Professor Cabral calculates that the value that Boeing's shareholders attach to dividends (α) is approximately 5 per cent and therefore, that they attach a weight of 95 per cent to future increases in firm value.

- To estimate the impact of subsidies on investment (β), Professor Cabral needs data on actual investment spending by Boeing in relation to dividends, and on the response to the marginal rate of return on investment to the investment level. For the former, Professor Cabral uses Boeing data on actual dividend payments and share repurchases from 2000 - 2006 ($2.1 billion) and arrives at his own estimate of Boeing's actual "investments" on the basis of Boeing data on R&D expenditures between 2000 and 2006 ($1.073 billion average annual R&D expenditures) plus his own derivations of investments in "aggressive pricing of new and mature LCA" which he obtains from the **Price Competition Model** ($483 million and $1.936 billion, respectively, discussed in the following section of this Appendix). From these figures, he calculates that Boeing's ratio of dividends to investment is: $2.1 billion : $3.492 billion, or approximately 0.60.[4144] Professor Cabral obtains his estimate for the value of the elasticity of the marginal rate of return on investment to the investment level from a 2000 study of the elasticity of marginal return to investment of a portfolio of patents. Professor Cabral also refers to "evidence from other manufacturing industries" which he claims suggests that the greater the amount of resources devoted to R&D, the lower the marginal returns to investment.[4145] From this information, Professor Cabral selects a value of -0.2.

11. On the basis of the foregoing, Professor Cabral arrives at the estimate that 85 cents of each additional dollar of subsidies is spent on three types of "investment". He estimates the precise allocation of the 85 cents of each additional subsidy dollar across these three forms of investment using the Price Competition Model which is described in Section C of this Appendix.

2. U.S. Criticisms and Professor Cabral's responses

12. The United States criticizes Professor Cabral's reasoning on the following general grounds: (i) Professor Cabral's reliance on what the United States considers to be the European Communities' "grossly overstated" calculation of the magnitude of the subsidies; (ii) the structure of Professor Cabral's model, in that it does not accurately reflect business decision-making by a company like Boeing; (iii) the key theoretical assumption on which it is predicated (i.e. that Boeing's investment decisions depend on its cash flow) which the United States considers to be invalid in the light of Boeing's unconstrained access to capital markets; and (iv) assumptions of fact which the United States alleges find no support in empirical evidence (e.g. that Boeing's sales in 2004 – 2006 involved significant switching costs or that its production during 2004 – 2006 involved significant learning curve gains, and that Boeing's only discretionary use of non-operating cash is payments to shareholders or "investment" in "aggressive pricing").[4146]

13. The United States argues that the flawed assumptions underlying Professor Cabral's model dictate the results that he purports to demonstrate; namely, that the untied subsidies cause Boeing to

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[4143] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 41. The rate of 10 per cent appears relatively high. Professor Cabral claims that this is a plausible value for the marginal rate of return, although average rates of return are usually much lower due to high fixed costs; Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 42.

[4144] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 45.

[4145] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, paras. 46-47.

[4146] United States' response to question 90, para. 224.

lower its LCA prices.[4147] The United States argues, therefore, that Professor Cabral's analysis can provide no support for the European Communities' attempt to establish a genuine and substantial link between the alleged subsidies and the alleged serious prejudice. These alleged flawed assumptions, as well as more technical criticisms of the calibrations of certain of the parameter values, are discussed in greater detail by the U.S. economic consultants, Professor Bruce Greenwald of the Columbia Business School and Drs. James Jordan and Gary Dorman of NERA Economic Consulting.

14. As part of the European Communities' Second Written Submission, Professor Cabral submitted an additional report in response to the U.S. criticisms of his analysis.[4148] In this Report, Professor Cabral addresses criticisms of his model. Professor Cabral concludes that the United States and its consultants are unjustified in their criticisms of his report, and that none of those criticisms undermine the validity of the methodology that he employed, or its conclusion that the subsidies Boeing received led Boeing to lower its LCA prices.[4149] The U.S. criticisms and Professor Cabral's responses to those criticisms are summarized in greater detail below.

(a) Assumption that Boeing's access to capital is constrained

15. Professor Greenwald's central criticism of Professor Cabral's model is its assumption that Boeing's access to capital is constrained. He argues that, having assumed this fundamental premise, against the weight of the evidence, Professor Cabral then embeds his conclusions in other "assumptions". Professor Greenwald says that, while markets may be imperfect and firms may make less than optimal decisions, "as long as firms have largely unconstrained access to capital, non-specific subsidies which amount to fixed transfers – the kind of subsidy at issue in the Cabral Report – will not affect firm investment decisions."[4150] According to Professor Greenwald, funds that flow from transfers (i.e. subsidies) will simply substitute for funds that flow from other sources (e.g. borrowing) and investment decisions will remain unaffected.[4151] Professor Greenwald argues that a company like Boeing, which has relatively little debt and which regularly repurchases large amounts of its stock, is obviously not subject to the sort of investment constraints that are the foundation of Professor Cabral's model.[4152] NERA makes a similar criticism, stating that the assertion that increases in a firm's internal cash flow lead to higher levels of firm investment is *not* clearly supported in the research literature.[4153] NERA argues, moreover, that Professor Cabral does not empirically show whether subsidies are correlated with increases in investment for Boeing.

16. Professor Cabral responds with several reasons why, in his view, the U.S. arguments that Boeing's investment decisions do not depend on variations in its cash flow are implausible. First, he argues that, to the extent that Boeing is not financially constrained, this is itself a result of the subsidies.[4154] Second, he argues that the balance between dividends and investments that increase

[4147] United States' comments on the European Communities' response to question 383, paras. 354-355.

[4148] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of "The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182.

[4149] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 60.

[4150] Greenwald Paper, Exhibit US-8, pp. 1-2.

[4151] Greenwald Paper, Exhibit US-8, p. 2.

[4152] Professor Greenwald also disagrees with Professor Cabral as to the interpretation of the economic literature on the question whether firms' investment decisions are sensitive to changes in their cash flow. Professor Greenwald asserts that the empirical literature generally concludes that, while many firms are constrained in their access to capital, and do adjust their investment levels in response to current cash flows, firms like Boeing (with low debt levels and high dividend/share repurchase levels) are not; Greenwald Paper, Exhibit US-8, p. 2.

[4153] Jordan and Dorman Report, Exhibit US-3, p. 5.

[4154] Professor Cabral considers what Boeing's debt-to-equity ratios would have been had it financed an amount equivalent to the amount of subsidies over 1989 – 2006 through increases in debt and foregoing share

firm value depends not just on whether a firm faces financial constraints, but also on market imperfections (e.g. information asymmetries between firms and financial markets have a significant impact on a firm's behaviour).[4155] According to Professor Cabral, given such additional factors, a firm will find it optimal to balance its various objectives with the constraints imposed on it by various sources of funds. Moreover, Professor Cabral argues that the fact that Boeing is able to borrow funds does not imply that Boeing is "financially unconstrained" in the sense understood by the Modigliani-Miller theorem. According to Professor Cabral, the costs associated with different sources of funds and the market signals associated with such choices, may lead a firm to choose sources or uses for its capital that would not otherwise represent the cheapest source or optimal use.[4156] Professor Cabral concludes therefore that, in terms of its investment behaviour, "the firm effectively behaves according to a function of the sort I considered in my model."[4157] Third, he argues that, consistent with this reasoning, statements by Boeing executives and empirical data contradict the U.S. theory.[4158]

17. Professor Cabral contends that, if Boeing had not invested any of its subsidies, but had instead distributed them to shareholders through dividends and repurchases, one would expect a substantial correlation between the historical levels of subsidies, on the one hand, and dividends and share repurchases, on the other. Moreover, Professor Cabral argues that one would expect to find *no* significant correlation between dividends and share repurchases (which would vary with the amount of subsidies) and the level of firm value that results from investments (which would not vary with the amount of subsidies).[4159] Professor Cabral asserts that, contrary to what would be expected if the U.S. arguments were true, there is *no* statistically significant correlation between subsidies and dividends plus share repurchases, while there *is* a clear correlation between firm value and dividends plus share repurchases. According to Professor Cabral, these trends fit closely with his model, and suggest that Boeing does optimally trade-off the benefits of currently distributed cash, future investments and the costs of obtaining funds.[4160]

(b) Assumption that Boeing maximizes a Cobb-Douglas function.

18. Professor Greenwald argues that it is not appropriate to assume that Boeing maximizes a Cobb-Douglas function of dividends and investment related to market value. He explains that, for example, a consumer who maximizes a Cobb-Douglas objective function over consumption levels of goods spends a constant fixed proportion of his income on each type of good, regardless of the

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repurchases. He concludes that Boeing could not have sustained such debt, and that it therefore could not have made the investments that were financed by the subsidies; Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 6-8.

[4155] Professor Cabral argues that, contrary to the assumptions underlying the Modigliani-Miller theorem, because of asymmetries of information (e.g. firms having better knowledge that investors of the risks and potential returns from investments), as well as taxation, and the possibility of financial distress, various sources of funds are *not* equivalent; Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 11.

[4156] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 13.

[4157] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 5.

[4158] Cabral points to various statements of Boeing executives which he considers to indicate that, consistent with the objective function in the Cabral model, Boeing management balances direct value (i.e. dividends and share repurchases) and indirect value (investments in the firm), and that Boeing management is sensitive to cash flow.

[4159] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 18.

[4160] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 19-20. Moreover, Professor Cabral argues that his model appropriately captures this trade-off through a reduced-form objective function.

relative prices of the goods, or the consumer's level of income. Therefore, if the price of one good doubles, the consumer would not increase the proportion of his income allocated to that good, but rather, would halve his consumption of that good. Professor Greenwald says that this particular, widely known property of the Cobb-Douglas utility function makes it highly unsuitable as a description of how a firm like Boeing would make its investment decisions in reality. Moreover, Boeing's actual behaviour strongly argues against the assumption that subsidies are always proportionately divided between dividends and investments.[4161]

19. Professor Cabral agrees with Professor Greenwald that the Cobb-Douglas functional form has had limited success in modeling demand curves, however, he states that he does not use the Cobb-Douglas functional form to model the trade-off faced by Boeing in its choice of dividends versus investment. According to Professor Cabral, the Cobb-Douglas functional form provides a useful and accurate approximation of the way Boeing actually balances investments that increase firm value and current returns to its shareholders (without meaning to imply that Boeing expressly uses such a model to make its investment decisions), a fact which is confirmed by the relative stability of Boeing's ratio of dividends to firm value.[4162]

20. Professor Cabral argues that the value of the ratio of dividends and investments to firm value that he calculated as part of his model is in any case quite close to the value one would obtain from estimating the value of the same ratio on the basis of 2000-2006 historical data, showing that the functional form that he chose was appropriate. He also argues that he performed extensive sensitivity analyses as part of his original report, in order to ensure that his results did not depend critically on the value of key parameters, and found that they do not.[4163]

(c) Static model that places unrealistic restrictions on Boeing's sources and uses of cash

21. According to NERA, while Professor Cabral's Objective Function Model is based on a line of research that asks how a firm manages its sources and uses of cash in order to maximize the value of its equity, it departs from the approach of the models in that literature "by placing unrealistic restrictions on the sources and uses of cash", with such restrictions driving the results of the model.[4164] NERA notes that the model allows (i) only two uses of Boeing's cash; namely, dividends and investment, (ii) only three forms of investment; namely, R&D price reductions, learning curve price reductions and switching cost price reductions, and does not consider other uses of cash (e.g. repayment of debt, acquisitions, contributions to the corporate pension fund, payments for operating expenses and interest). Moreover, NERA argues that Professor Cabral's model does not incorporate the effect of other sources of cash (e.g. Boeing's profits, changes in net working capital, cash from asset sales, access to external financing, the issuance of stock). According to NERA, these restrictions essentially ensure the result that whenever Boeing receives a subsidy, it increases its investment spending.[4165]

22. NERA also claims that investment models in the literature are multi-period and dynamic, in which firms continually respond to current and expected economic and firm-specific conditions by adjusting sources and uses of cash in order to maximize equity value.[4166] NERA argues that, by

[4161] Greenwald Paper, Exhibit US-8, p. 3.

[4162] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 22-30.

[4163] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 26.

[4164] Jordan and Dorman Report, Exhibit US-3, p. 4.

[4165] Jordan and Dorman Report, Exhibit US-3, p. 4.

[4166] NERA provides some examples of the types of financial constraints that are considered in the literature and built into the models, or used in empirical testing. NERA argues that the Cabral model contains

contrast, Professor Cabral's model is static – producing the "completely unrealistic" result that Boeing makes the same decision about the use of its subsidy cash every year from 1989 to 2006 (i.e. that it invests 85 per cent of each subsidy dollar), regardless of the business cycle and other factors affecting its sources and uses of funds.[4167] NERA considers that, although the Cabral model is specified as a maximization problem in which firm equity is maximized, it is an unrealistically restricted problem, because in the model, Boeing gets to make only one decision; the allocation of cash between dividends and investment. According to NERA, the Cabral model, "by assumption rather than by a well-specified theory backed up by empirical analysis" imposes a dividend/investment trade-off on Boeing in which Boeing does not have enough money to carry out a desired investment programme.[4168]

23. Professor Cabral's response to criticisms that his model unrealistically concludes that Boeing allocates a constant proportion of subsidy (85 per cent) to investments every year, regardless of general economic conditions or the business cycle, is to note that his calculations are of "average impact", and that, although they may be too high or two low in particular years, "on average they are about right and represent a reasonable approximation of reality."[4169] To demonstrate, Professor Cabral notes that if he divides 2000 – 2006 into two sub-periods, the differences in resulting parameter values are minimal (instead of 85 per cent of the subsidy going to investment, he calculates that 87 per cent goes to investment in 2000 – 2003 and 83 per cent in 2004 – 2006). He notes that in these two sub-periods, economic conditions for the LCA industry were sharply different.[4170]

(d) Assumption that in-kind subsidies and direct subsidies are functionally equivalent.

24. Professor Greenwald disputes Professor Cabral's assertion that the value of in-kind (i.e. non-cash) subsidies can be measured by the cost that Boeing would have to incur to achieve the effective value provided by the in-kind subsidies. According to Professor Greenwald, the problem with this assertion is that it assumes that the cost of achieving the same effective value as the in-kind subsidies can be defined independently of other variables (e.g. Boeing's financial condition, level of cash subsidies, prices of labor and other inputs, output levels), when in general, it cannot.[4171] Professor Cabral responds that, on the contrary, NASA is more likely better able to do what it does than Boeing, and that his assumption therefore effectively underestimates the effect of the in-kind subsidies provided by NASA.[4172]

(e) Assumption that Boeing's preference for dividends is comparable with its total market value.

25. Aside from the use of a Cobb-Douglas function, Professor Greenwald also faults Professor Cabral's use of dividends (which are annual flows of funds) with total market value of the company (a stock, the value of which is fixed at any moment in time) in the same function.[4173] Professor Greenwald alleges that, as a result, Professor Cabral is able to assert that, because annual dividends are a small fraction of the company' market value, Boeing will devote a comparably small fraction of

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none of this rich literature which allows the models in the literature to capture the degree of financial constraint of a firm, nor is it based on an empirical analysis to determine whether Boeing should be modeled as though it is materially financially constrained; Jordan and Dorman Report, Exhibit US-3, p.9

[4167] Jordan and Dorman Report, Exhibit US-3, p. 5.

[4168] Jordan and Dorman Report, Exhibit US-3, p. 8.

[4169] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1882, para. 43.

[4170] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 44.

[4171] Greenwald Paper, Exhibit US-8, p. 5.

[4172] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 33.

[4173] Greenwald Paper, Exhibit US-8, p. 3.

any additional cash flow to dividends. Professor Greenwald says that Professor Cabral should have either had Boeing maximize a function of dividends and *changes* in market value, or a function of a net present value of dividends and the market value of the firm.[4174] In response to this criticism, Professor Cabral acknowledges the importance of making the distinction between stocks vs. flows, but demonstrates that a re-writing of his analysis using the flow equivalent of firm value along with dividends (or vice-versa) does not change the results.[4175]

(f) Criticisms of Professor Cabral's estimation of values of certain parameters

26. NERA also criticizes Professor Cabral's estimation of the values of certain parameters. For example, NERA considers that the parameters that Professor Cabral estimates to measure the relative importance of dividends versus other investment opportunities to shareholders (i.e. the parameters that are key to yielding the result that Boeing would allocate 15 cents of each additional dollar to dividends and 85 cents to investments) are either (i) counter-intuitive, in that they imply that, as the rate of return of a potential investment increases, Boeing will invest less and return more to shareholders; (ii) not based on Boeing empirical data; or (iii) not found in the general literature regarding firm investment behaviour and appear to be unique to the Cabral model.[4176] Moreover, NERA argues that Professor Cabral's estimate that Boeing would devote 85 cents of each dollar of subsidy to additional investment seems extraordinarily high for a company like Boeing, which has all the hallmarks of a financially unconstrained firm (e.g. large corporation with access to global capital markets, a diverse set of individual and institutional shareholders, and widespread coverage by bond rating firms and stock analysts).[4177] NERA argues that there are no signs that Boeing had a shortfall of cash during the period of Professor Cabral's analysis; on the contrary, Boeing's financial data indicates that, even if the alleged cash subsidies were taken away, Boeing still generated more than enough cash to fund its investment programme.[4178]

27. This leads to NERA's next criticism of Cabral's model, which is that Professor Cabral fails to empirically test its validity, both as a model for predicting the investment behaviour of firms, and also as a model of how Boeing would invest any subsidies. According to NERA, Professor Cabral's model is particularly in need of empirical testing because of (i) its basic structure, which is unlike other economic models of firm investment behaviour; and (ii) its dubious implications, including that shareholders would prefer higher dividends when a firm's expected return on investments *increases* and that a firm like Boeing is so financially constrained that it would increase investment spending by 85 per cent of any subsidy.[4179]

28. Professor Cabral responds by noting the actual stability of this ratio in Boeing data between 1989 and 2006 and regressing firm value on dividends, obtaining a coefficient that is close to his model estimate. Finally, with respect to the United States' observation that his model would imply higher dividend payments in face of investment opportunities offering higher returns, Professor Cabral explains the difference between model calibration, to which the relationship implied by the United States should be applied, and comparative statics that show the response of a model to an exogenous change on its equilibrium values. Professor Cabral explains that the above relationship

[4174] Greenwald Paper, Exhibit US-8, p. 4.
[4175] Luís M. B. Cabral, Response to the U.S. Criticisms of My Analysis of 'The Impacts of Development Subsidies Granted to Boeing', 14 November 2007, Exhibit EC-1182, paras. 21-30. Professor Cabral argues that with current firm value being equivalent to a corresponding perpetual annuity, it can be shown that the objective function used would only change by a multiplicative constant that does not affect the outcomes of the model.
[4176] Jordan and Dorman Report, Exhibit US-3, pp. 10-11.
[4177] Jordan and Dorman Report, Exhibit US-3, p. 11.
[4178] Jordan and Dorman Report, Exhibit US-3, p. 11.
[4179] Jordan and Dorman Report, Exhibit US-3, p. 12.

between dividends and the marginal rate of return to investment is the result of a "reverse engineering" process involved in model calibration that seeks to derive model parameters that are consistent with historical data. In other words, a high marginal rate of return on investment implies a high weight placed by the firms on dividends, or else the firm would have invested up to a higher level, resulting in a lower marginal return on investment. Conversely, Professor Cabral shows that the comparative static outcome from a positive profitability shock is a higher investment level, not a higher level of dividends, featuring as a multiplicative factor in his model.[4180]

29. Professor Cabral dismisses as inappropriate NERA's criticism that he failed to empirically test his model using real world data. Professor Cabral explains that he addresses the absence of certain Boeing data by including a sensitivity analysis, which determines how variations in the estimates of certain data would affect his ultimate calculations of price effects resulting from his model. Professor Cabral notes his conclusion from that analysis was that even if there were significant changes in the relevant parameters, this would not substantially alter the model's results.[4181]

C. THE PRICE COMPETITION MODEL

1. Structure and mechanics of the Price Competition Model

30. As previously mentioned, the main purpose of this second model is to determine Boeing's division of subsidies between the three types of investment: (i) "aggressive pricing" due to learning curve efficiencies; (ii) "aggressive pricing" due to buyer switching costs; and (iii) R&D expenditures.[4182]

31. Professor Cabral chooses a standard Hotelling model of price competition in a duopoly market as his basic framework. The essential features of the Hotelling model are that competition between the two competitors is on the basis of price (rather than quantities) and that the products are differentiated. The more differentiated the products, the less likely it is that producers will compete the prices down to average cost (the competitive outcome of the Bertrand model of price competition). While Professor Cabral uses the basic Hotelling framework, he introduces an additional variable that denotes product quality or "value" (z). One important feature of Professor Cabral's model is that increases in product quality lead to increases in nominal prices, but *decreases* in quality-adjusted prices. In other words, when a firm increases its product quality, Professor Cabral assumes that it will raise its price by less than the inherent value of the rise in product quality. Professor Cabral does not explain why or how this rather mechanical outcome of his definition of "quality-adjusted price" is necessarily consistent with the optimal behaviour of a firm. In addition, Professor Cabral uses a fixed 2:3 relationship between prices and cost reductions, based on the simplest set up of the Hotelling model.

32. Professor Cabral considers that Boeing engages in essentially three types of "investment": interpreting the concept of "investment" as a "current expenditure that increases future profits".[4183] The first two types relate to "aggressive pricing" of new and mature models of aircraft. The third is

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[4180] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 34-41.

[4181] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 58.

[4182] As noted in the discussion of the Objective Function Model, the values of the first two are plugged into the parameters for the Objective Function Model to arrive at the conclusion of the Objective Function Model that 85 cents of every additional subsidy dollar will be applied to investments to increase firm value.

[4183] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 27.

development (and pre-development) expenditures to create new aircraft or increase the value of aircraft that it is in the process of developing, which are discussed further in (c) below.

(a) "Aggressive pricing" of new aircraft implied by learning curve efficiencies

33. According to Professor Cabral, aggressive pricing of *new models* of aircraft (i.e. aircraft at early stages of production) leads to higher sales in the current year and, through the dynamics of the learning curve, leads to lower production costs in future years.[4184] The "learning curve" refers to the negative correlation between cumulative output and unit cost: the more aircraft of a given type produced by a firm, the less it costs to produce the next unit of that aircraft.[4185]

34. Professor Cabral sets out to estimate the dollar value of Boeing's investment in aggressive pricing while moving down the learning curve. He considers that the learning curve is defined by three elements: (i) the cost of the first unit of production; (ii) the steepness of the learning curve; and (iii) the number of units after which learning ceases. Professor Cabral notes that previous research on aircraft manufacturing suggests that the learning curves are very steep, thus creating an incentive for LCA producers to price aggressively to generate more sales and move more rapidly down the learning curve in order to reduce per-unit production costs. His calculations are based on the assumption that the learning curve is particularly steep over the first 100 units of any LCA model and that Boeing strategically prices as though its costs for these aircraft produced at the steep part of the learning curve were the costs for aircraft produced at the bottom of the learning curve (i.e. approximately the 200th unit).[4186]

35. Since the learning curve portrays cost as a function of learning by increasing output, Professor Cabral links this "cost function" to pricing using a formula defining the "break-even" level of output (which he estimates at 300 units, based on reports of the break-even points for the A380, A350 and 787).[4187] Using, among other parameter estimates, data on Boeing average annual aircraft sales and development expenditures between 2000 and 2006, he then calculates the remaining unknown parameter; i.e. the cost of the first unit. He is then able to calculate the highest possible cost of production to Boeing, when it does not take into account the effect of learning curve efficiencies, and the lowest possible cost of production, when the learning curve is flat.[4188]

36. Professor Cabral estimates that for an "average Boeing aircraft" during the production stage of the first 100 units, the learning curve implies pricing that is $9.53 million lower per plane.[4189] This estimate is based on an "average" Boeing aircraft (i.e. number of seats, price and number of annual deliveries) which he calculates from data on Boeing's aircraft deliveries and estimated market prices

[4184] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 27.
[4185] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 53.
[4186] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4,para. 59.
[4187] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 57.
[4188] The difference between these two figures would exaggerate the average loss if learning curve effects were ignored, because producers would still produce more than one unit, price each unit according to cost and move down the learning curve. Therefore, Professor Cabral assumes that Boeing would price its aircraft somewhere in the middle of the learning curve, as an average up to a point where the cost reductions become less steep (this he assumes to be at 100 units, without offering a justification for this assumption); Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 60.
[4189] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 60.

(based on a discount of 45.75 per cent from published list prices) for the various models of Boeing aircraft.[4190] Professor Cabral also estimates that 13.5 per cent of aircraft sold by Boeing are "new" in the sense that Boeing is still moving down the steep portion of the learning curve.[4191] In other words: 13.5 per cent of 378 average annual deliveries of planes involved $9.53 million of learning curve-related cost reductions. Professor Cabral therefore concludes that Boeing's annual "investment" in "aggressive pricing" due to the learning curve is $483 million.[4192]

(b) "Aggressive pricing" implied by buyer switching costs

37. Professor Cabral considers that the "investment" nature of increasing current sales through aggressive pricing is also present for *mature aircraft* through the phenomenon of buyer switching costs. Switching costs refer to the costs that buyers who operate one particular family of aircraft must incur to switch to a new supplier (such costs stem from pilot training, aircraft maintenance etc.). Professor Cabral states that, to the extent that a buyer will be in the market for the same family of planes in the future, having previously bought from one supplier increases the chances that the same supplier will be chosen the next time around. For this reason, Professor Cabral claims that it makes strategic sense for Boeing to aggressively price its mature LCA models to *new customers*.[4193]

38. Professor Cabral estimates the dollar amount of subsidies targeted at new buyers of Boeing aircraft who may become repeat buyers in the future. He does this by interpreting the Hotelling demand function as a "probability of making a repeat sale", and solving this function with respect to switching costs (expressing other variables in terms of a demand elasticity and likelihood of switching, taking values for these parameters from other LCA studies and his own estimates, respectively).[4194] Professor Cabral therefore estimates in percentage terms how much higher prices would be if switching costs were not taken into account by Boeing. He calculates that switching costs induce price discounting of 25 per cent on *current sales* when Boeing sells to new customers, in order to lock in those new customers who would then face switching costs if they were to order from Airbus in future. Since pricing to take account of switching costs applies to new buyers, he also estimates the average share of Boeing's annual sales that are to airlines that have not previously bought from Boeing an aircraft of the same family *and generation*. Based on Boeing 2000 – 2006 data, that percentage is 37.4 per cent.[4195] Cabral therefore concludes that 37.4 per cent of 378 annual aircraft deliveries involved discounts of 25 per cent from the average market price of $54.7 million. This corresponds to an average annual "investment" in "aggressive pricing" through switching costs of $1.936 billion.[4196]

[4190] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 52. The result is that Professor Cabral's "average Boeing aircraft" has a seating capacity of 190, a market price of $54.7 million and 378 annual deliveries.

[4191] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 70.

[4192] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 60.

[4193] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4. Professor Cabral considers that the strategic benefit from subsidizing sales of mature aircraft is also true, "if to a lesser extent" for ongoing buyers (i.e. existing customers).

[4194] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 65. Profesor Cabral says that his estimate that there is 25 per cent probability of switching sellers is consistent with the observation of demand patterns for wide-body aircraft.

[4195] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4,para. 67.

[4196] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 68.

(c) R&D expenditures can be considered equivalent to future price reductions where price is considered the "effective price on a per-value unit" basis

39. Professor Cabral considers that, where subsidies are applied to investments in aggressive pricing of new planes (learning curve), or of mature aircraft to new customers (switching costs), their impact is "immediate".[4197] However, the impact of a portion of each subsidy dollar is that is applied to investments in R&D is "only felt in terms of future pricing."[4198] He reasons that greater investments in R&D will lead to a higher quality aircraft, and thus, to a "greater buyer willingness to pay".[4199] According to Professor Cabral, if nominal LCA prices were to remain constant, this would mean that the "effective price on a per value unit basis" would be lower. In other words, higher R&D expenditures lead to higher nominal prices, but lower prices on a per value unit basis.[4200] Professor Cabral concludes that for a given unit of "aircraft value", Boeing is thus able to charge a lower "price".[4201] On the basis of Boeing data for the years 2000 – 2006, he determines average annual spending on R&D to be $1.073 billion.[4202] As noted above, the price impact of annual R&D spending is felt in terms of pricing over the whole lifetime of an aircraft design. The total price impact of R&D subsidies in a given year then depends on the R&D subsidies provided in this and previous years.[4203]

2. U.S. Criticisms and Professor Cabral's responses

(a) Professor Cabral's theory of how Boeing would behave is at odds with empirical evidence regarding Boeing's actual pricing strategies between 2000 and 2006

40. The United States argues that the implications of Professor Cabral's theory about how Boeing would have operated in the LCA markets are not borne out by the events that actually occurred in the markets. The United States submits that, over the 2000 - 2006 period, Boeing's share of the global LCA market measured by volume of deliveries *dropped* from 61 to 47 per cent, indicating that, far from pricing "aggressively", Boeing was being systematically *under priced* by Airbus, which gained the market share that Boeing lost.[4204]

41. According to the United States, Boeing in fact *resisted* pressure to reduce its prices in response to Airbus' price undercutting until 2004, when it could no longer sustain the consequent market share losses. The United States argues that Boeing resisted the pressure to reduce its prices for so long because of the significant long-term costs entailed in price reductions, which tend to condition the market for lower prices. In this regard, the United States makes a further criticism of Professor Cabral's analysis; namely, that Professor Cabral assumes that "aggressive pricing" increases firm value, without accounting for the negative consequences to the value of the business.[4205]

[4197] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 69.
[4198] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 72.
[4199] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 72.
[4200] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 72.
[4201] Cabral also considers that the per value unit price (or "corrected price") is the relevant determinant of market demand, a conclusion he attempts to demonstrate formally.
[4202] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 45, Table 2.
[4203] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, para. 85, Table 5.
[4204] United States' first written submission, para. 858.
[4205] United States' first written submission, para. 859. The United States argues that a robust analysis of a firm's propensity to invest its cash in "aggressive pricing" instead of distributing it to shareholders would have

42. In response to these criticisms, the European Communities argues that the Cabral model does not analyze the absolute levels of deliveries or market shares held by Boeing and Airbus, but the *marginal* pricing effects on order pricing of additional subsidies to Boeing. The European Communities says that the question whether or not the marginal pricing effects on order pricing lead to Boeing actually gaining or losing market share at any point in time is not answered by the model, and is not relevant to assessing the model's accuracy.[4206]

(b) Nature of pricing incentives related to "learning curve efficiencies"

43. The United States agrees with Professor Cabral that significant learning curve efficiencies occur over production of the first one hundred or so units of a new aircraft.[4207] However, the United States argues that Professor Cabral is wrong to assert that an LCA producer will lower its prices *in a campaign-specific context* to achieve learning curve gains. According to the United States, learning curve efficiencies are factored into a producer's projected costs at the *time the launch decision is made*.[4208] At this time, the producer projects pricing targets for the new aircraft that, over its projected life, must exceed the producer's fully-loaded average production costs by an amount sufficient to justify the investment.[4209] According to the United States, these pricing projections account for concessions that are routinely granted to launch customers before the volume of production is sufficient to generate learning curve efficiencies. The United States argues that, because the learning curve is factored into the pricing targets at the time the programme is launched, there is no expectation of subsequent, campaign-specific learning curve adjustments to price.[4210]

44. The United States also considers that Professor Cabral is wrong to assert that learning curve efficiencies apply to the production of the first 100 units of each (or any) *subsequent variants* of a new model.[4211] The United States argues that, of the 2,640 Boeing LCA deliveries between 2000 and 2006 that form the basis for Professor Cabral's analysis, *none* involved significant learning curve gains; i.e. the production of each major model delivered between 2000 and 2006 had exceeded 100 before the year 2000.[4212] The United States argues that, between 2000 and 2006, Boeing's learning curve investment in the pricing of these sales was in fact "zero", or "close to zero", not $438 million per annum, as calculated by Professor Cabral.[4213]

45. NERA also argues that, although there is no dispute that there are "substantial" learning curve effects associated with the manufacture of LCA, they have no direct effect on LCA pricing.[4214] NERA agrees that LCA manufacturers price initial units of LCA as though they were already at the bottom of the learning curve, however, NERA argues that this is a feature of the nature of production and competition in the industry, and would occur whether or not an LCA manufacturer had received

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to factor into the analysis the costs of aggressive pricing in terms of profit margin reductions and the impact of a reduction in profit margins on the market value of the firm.

[4206] European Communities' second written submission, para. 781.

[4207] The United States notes that it has "serious reservations" about Cabral's conclusion that learning curve efficiencies *only* occur over the first 100 units produced, but assumes *arguendo* for purposes of this discussion, that the assumption is not incorrect; United States' first written submission, para. 848, footnote 1043.

[4208] United States' first written submission, para. 848.

[4209] United States' first written submission, para. 848.

[4210] United States' first written submission, para. 848. The United States refers to a statement of Clay Richmond, Vice President of Revenue Management at Boeing Commercial Airplanes, who states that, "{w}hile included in Boeing's program cost projections, learning curve efficiencies are not separately factored into pricing in individual sales campaigns", Statement of Clay Richmond, Exhibit US-275, para. 3.

[4211] United States' first written submission, para. 847.

[4212] United States' first written submission, para. 853.

[4213] United States' first written submission, para. 853.

[4214] Jordan and Dorman Report, Exhibit US-3, p. 13.

subsidies.[4215] According to NERA, Professor Cabral's analysis implicitly assumes that, in the absence of the subsidies, Boeing would not have priced as though it were at the bottom of the learning curve, and that, if Boeing had received a lower amount of subsidies, it would have raised its LCA prices to initial customers.[4216] NERA identifies this as a fundamental flaw in Professor Cabral's analysis.

46. NERA also criticizes Professor Cabral's quantification of the learning curve price reductions in that it is based on there being steep learning curve effects for the first 100 units of every *version* of each Boeing LCA model built between 1989 – 2006 (e.g. the Boeing 737-600, 737-700, 737-800 and 737-900 were each assumed to experience steep learning curve effects during the production of the first 100 units of each version).[4217] NERA considers that this does not reflect the reality of the LCA business. For example, NERA notes that, given that all four current versions of the 737 are assembled in the same factory, and share a common wing, fuselage, cockpit and most other components, there is no reason to expect that each of the four versions of each LCA model benefits separately from learning curve effects that are particularly steep during the first 100 units.[4218]

47. The European Communities responds to these criticisms in the following manner. First, in relation to the criticism that learning curve effects are factored into the pricing targets at the time of launch of an LCA programme, and not in the context of campaign-specific adjustments to price, the European Communities notes that the Boeing expert on whom the United States relies for its statement that learning curve efficiencies are not separately factored into pricing individual sales, but rather, are included in Boeing's programme cost projections, far from contradicting Professor Cabral's reasoning, confirms that Boeing has an incentive to (and does) offer additional launch concessions for the initial aircraft sold under a programme.[4219] According to the European Communities, the level of interest that Boeing has in convincing the market that demand is significant and thereby moving down the learning curve is impacted by the subsidy funds that it has available to justify accepting lower margins on particular sales.[4220]

48. Second, the European Communities rejects the U.S. criticism that learning curve efficiencies do not also apply to the first 100 units of subsequent *variants* of LCA models. The European Communities submits that "available evidence" demonstrates that learning curve effects benefit the entire production life of an aircraft, and that additional learning curve effects apply to new models within an aircraft family. On this basis, the European Communities argues that Professor Cabral's estimate of the percentage of Boeing aircraft that benefited from learning curve effects during the 2000 to 2006 period is therefore reasonable.[4221]

[4215] NERA argues that the intense competition between Airbus and Boeing to launch successful new models means that they *must* price on a forward-looking basis; they cannot hope to succeed by charging higher prices to launch customers to reflect the higher costs of producing those initial airplanes; Jordan and Dorman Report, Exhibit US-3, p. 15.

[4216] Jordan and Dorman Report, Exhibit US-3, p. 15.

[4217] Jordan and Dorman Report, Exhibit US-3, p. 15.

[4218] Jordan and Dorman Report, Exhibit US-3, p. 15.

[4219] European Communities' second written submission, para. 771. The European Communities identifies the Boeing expert as James Hayes, Boeing's Director for 787 Pricing, but the Boeing expert is Clay Richmond (see United States' first written submission, paras. 847-848).

[4220] European Communities' second written submission, para. 771.

[4221] European Communities' second written submission, para. 772. The European Communities argues that, in any event, Professor Cabral's sensitivity analysis demonstrated that even where the share of aircraft benefiting from learning curve effects was significantly lower than the model parameter, the overall impact to his conclusions was negligible.

BCI deleted, as indicated **[***]**

(c) Estimation of the degree to which prices are affected by buyer switching costs

49. The United States acknowledges that, unlike the impact of learning curve efficiencies, the phenomenon of switching costs does arise in the sales campaign-specific context. However, the United States argues that Professor Cabral mistakenly ascribes switching costs to sales in which switching costs did not arise; thereby greatly exaggerating the frequency with which Boeing considers a price concession for switching cost reasons. According to the United States, switching costs occur when an airline decides to buy a new supplier's current generation aircraft, instead of buying additional current generation aircraft from the incumbent supplier. The United States says that, in contrast, price concessions relating to switching costs do not factor in sales of (i) a new type of LCA (e.g. the 787); (ii) a *new generation* of a type of aircraft that an airline already operates (e.g. the purchase of a 737-800 by an airline that operates 737-300s); or (iii) a *new variant* of a type of aircraft that an airline already operates (e.g. the purchase of a 737-800 by an airline that operates 737-700s).[4222]

50. The United States argues that Professor Cabral mistakenly assigns switching costs to all purchases by airlines that have not bought aircraft of the same *generation* and family before, and therefore estimates that 37.4 per cent of Boeing's sales are to new customers of that particular aircraft family.[4223] According to the United States, an analysis of the 2,644 deliveries made by Boeing during 2000 – 2006 shows that no more than 120 (i.e. only 4.5 per cent) involved the type of switching costs that could have led Boeing to make switching cost price concessions.[4224]

51. In addition, the United States argues that Professor Cabral's understanding of the nature of the pricing incentives related to switching costs is at odds with the realities of the LCA industry.[4225] According to the United States, Professor Cabral conceives of the price incentives related to future switching costs as being based on a link between the probability of future switching and *current price discounts*. The United States argues that, in reality, the question whether a current buyer switches suppliers in the future will depend more than anything on whether, at that future time, the challenging supplier offers a discount large enough to offset the customer's switching cost. The challenging supplier's ability to offer such a discount in the future is not affected by historical data on the probability of switching across suppliers. Therefore, according to the United States, a supplier has no incentive to offer current discounts based on the historical probability data that Professor Cabral uses.[4226]

52. NERA agrees with Professor Cabral that there can be switching costs associated with purchasing LCA, whether for replacement or fleet growth. However, NERA says that the magnitude of these costs will vary widely depending on the existing fleet of the airline and the new airplane alternatives under consideration.[4227]

[4222] United States' first written submission, para. 855; referring to the Statement of Clay Richmond, para. 6, Exhibit US-275.

[4223] United States' first written submission, para. 854.

[4224] United States' first written submission, paras. 851, 85,; referring to the Statement of Clay Richmond, para. 8, Exhibit US-275; United States' comments on the European Communities' response to question 95, para. 244. In addition, the United States argues that, where Boeing was the incumbent, the evidence shows that it resisted price concessions, and as a result, lost major sales campaigns to Airbus on price, despite the costs that those airlines incurred in switching to Airbus.

[4225] United States' comments on the European Communities' response to question 95, para. 243.

[4226] United States' comments on the European Communities' response to question 95, para. 243.

[4227] Jordan and Dorman Report, Exhibit US-3, pp. 15-16. The authors note, for example, that there is typically substantial commonality across versions of a model that are of the same generation (e.g. Boeing 737 family, or the Airbus A320 family) and there can also be commonality across models, such as between the A330 and A340.

53. Moreover, NERA considers that Professor Cabral's formula for estimating that switching costs induce price discounting of 25 per cent when selling to new buyers is overly simplistic, not based on data relating to any actual Boeing price concessions offered to any customer in a sales campaign, and fails to take account of the complexities of competition between Airbus and Boeing in which each sales opportunity generates an individualized sales campaign targeted at the circumstances of the particular customer.[4228] In this regard, NERA notes that during the 2004 – 2006 "reference period", Boeing delivered 973 airplanes of which 37.4 per cent (i.e. 364 planes) would, based on Professor Cabral's methodology, be assumed to involve switching cost price reductions. NERA considers this to be an unrealistic assumption given that 366 deliveries were made to long-time operators of Boeing airlines or to leasing companies, neither of which would have been affected by switching costs.[4229]

54. NERA also argues that Professor Cabral's analysis necessarily implies that, in the absence of the subsidies, Boeing would not have priced as it did in order to offset prospective buyers' switching costs (and as a corollary, that had Boeing received one less dollar of subsidy, it would have raised its prices to new customers). NERA considers that such an assumption ignores the intense competition between Airbus and Boeing in their LCA campaigns to prospective customers.[4230]

55. The European Communities makes the following points in response to these criticisms. First, the European Communities disagrees that no switching costs could arise when an airline orders a new generation of a type of aircraft that an airline already operates. In this regard, the European Communities contends that customers have publicly affirmed that switching costs from moving to a new generation of one producer's aircraft can be even greater than those of changing from one producer to another.[4231] Second, the European Communities argues that the United States has misrepresented the relevance of switching costs in Professor Cabral's model. According to the United States, Professor Cabral's model focuses on Boeing considering in its current pricing decisions the possibility of future switching costs that would be incurred by an airline (i.e. as a justification for Boeing to offer lower prices to a customer today).[4232] From this perspective, switching costs can be relevant in sales of a new type of LCA, or new generations of existing LCA, because there is the possibility of locking in the customer for future sales. In addition, the European Communities argues, the related U.S. criticism that the share of Boeing sales that involved switching costs was dramatically less than Professor Cabral's assumption (4.5 per cent compared to 37.4 per cent) similarly misses the point. In any case, the European Communities argues that Professor Cabral's sensitivity analysis shows that even if the share of aircraft sales affected by switching cost considerations were different from his estimate, the impact on his overall result is negligible.[4233]

(d) R&D expenditures as future price reductions

56. NERA criticizes Professor Cabral's attempt to convert Boeing's R&D expenditures on commercial airplanes into price reductions. According to NERA, the essence of the intense competition between Boeing and Airbus is to design and build better airplanes (improved versions of existing models as well as new models). Yet, according to NERA, Professor Cabral's implicit

[4228] Jordan and Dorman Report, Exhibit US-3, pp. 15-16.
[4229] Jordan and Dorman Report, Exhibit US-3, p. 17, footnote 14.
[4230] Jordan and Dorman Report, Exhibit US-3, p. 17.
[4231] European Communities' second written submission, para. 775, footnote 1179. The European Communities refers to an article in which the easyJet CEO said that easyJet faced higher switching costs in adding Boeing 737-700 aircraft to its existing line of 737-300s than it would in adding Airbus A319 models to its fleet. Part of the switching costs involved in moving from one Boeing generation to the next was the fact that 30 per cent of easyJet pilots were only certified to fly one or other of the 737 types; "Easy Does It" Airline Business, 12 January 2002, Exhibit EC-1247.
[4232] European Communities' second written submission, paras. 776-778.
[4233] European Communities' second written submission, para. 778.

assumption is that, in the absence of the subsidies, Boeing would not have made the same investments in R&D.[4234]

57. NERA notes Professor Cabral's conclusions that, over the 1989 – 2006 period, subsidies to Boeing have resulted in "R&D price reductions" by Boeing of $4.43 billion (plus an additional $2.41 billion for 2007 – 2022). NERA considers that this could only be true where either: (i) those R&D expenditures would not have been productive investments for Boeing absent the subsidies, but Boeing had no alternative productive investments, so it made them anyway; or (ii) such R&D expenditures would have been productive investments for Boeing absent the subsidies, but Boeing lacked the necessary capital to make them, absent the subsidies.[4235] NERA argues that there is no logical or empirical basis for either proposition.

(e) Choice of the Hotelling model of oligopoly behaviour as representative of the nature of price competition between Airbus and Boeing

58. The United States argues that Professor Cabral's choice of a Hotelling model for his analysis of duopoly pricing between Airbus and Boeing is badly flawed (although it stresses that the flawed modeling assumption described above would invalidate Professor Cabral's results even if his choice of a Hotelling model were correct).[4236] According to the United States, the most egregious flaw in the choice of the Hotelling model for an analysis of price competition between Airbus and Boeing is that under the Hotelling/Bertrand models, each competitor makes a *single, simultaneous price offer*. According to the United States, this is at odds with the nature of pricing in the LCA market, where there is typically a *vigorous sequence of competing price bids*.[4237] The United States argues that the correct pricing model for the LCA market is what is known as a "repeated Bertrand competition". The United States contends that the literature of repeated Bertrand pricing generally concludes that any rational price outcome (from monopoly to competitive) is a *possible* equilibrium outcome of this form of oligopoly competition and that the actual outcome in any concrete case will depend on factors such as the competitive attitudes and cultures of the competitors. The United States notes that Professor Cabral's "highly deterministic pricing model" is completely at odds with this conclusion.[4238]

59. Professor Greenwald also criticizes the assumptions made regarding the basic model of price competition underlying Professor Cabral's conclusions. He argues that Professor Cabral's model assumes that prices cannot be tailored to individual airlines, either because, in a sales campaign, neither Boeing nor Airbus has knowledge of an airline's preferences when setting price, or because they are somehow constrained to keep their prices the same for all airlines.[4239] Professor Greenwald considers that this assumption bears no relationship to the reality of extended bidding by Airbus and Boeing for individual orders, their respective knowledge of well-established airline preferences, or "painstakingly negotiated" final sales contracts. Professor Greenwald argues that, in a market characterized by individual bargaining with airlines with well-known preferences, the final price each airline pays depends on whether its preference for one LCA manufacturer over the other makes it a Boeing or Airbus buyer. Professor Greenwald also explains that a realistic model would need to account for this reality and that such a model would have been simpler than Professor Cabral's model.

[4234] Jordan and Dorman Report, Exhibit US-3, p. 18. The United States also independently makes this argument. The United States contends that neither the European Communities nor Professor Cabral has proven that the government funding that Boeing received for R&D work that it carried out was for work that Boeing would otherwise have carried out on its own, and in amounts that Boeing would otherwise have spent on its own; United States' first written submission, para. 841.

[4235] Jordan and Dorman Report, Exhibit US-3, p. 19.

[4236] United States' comments on the European Communities' response to question 382, para. 342.

[4237] United States' comments on the European Communities' response to question 382, para. 347.

[4238] United States' comments on the European Communities' response to question 382, para. 348.

[4239] Greenwald Paper, Exhibit US-8, p. 5.

60. In response, Professor Cabral notes that his model considered the impact of subsidies on an "average" buyer of Boeing and Airbus aircraft, rather than a model incorporating LCA pricing tailored to specific customers.[4240] However, this latter type of model would have resulted in greater mathematical complexity. Moreover, modeling one single buyer with an average preference therefore provides a good approximation of the average price and of the average impact of subsidies on prices as explicitly as modeling the entire distributions of buyer types.[4241] Professor Cabral also observes that the repeated Bertrand model of price competition suggested by the United States may not be appropriate for the LCA market because there is no evidence of collusion between Airbus and Boeing that would require that their interaction be modelled as a repeat game.[4242]

D. EVALUATION OF THE CABRAL MODEL

1. Preliminary considerations regarding the Panel's evaluation of the Cabral model

61. The Cabral model is a particular type of empirical simulation model which is known as a "calibrated model". Economists create calibrated models by assuming the existence of a relationship between different variables; for example, the relationship between subsidies and prices. They also make assumptions about the nature of that relationship, which is reflected in the parameters of the model. Calibration of the model involves choosing values for the parameters that ensure that the model assumptions and the observed data are consistent. Calibrated models can be distinguished from estimated econometric models which use statistical techniques (i.e. regression analysis) to test the validity of the assumptions on which the model is based.

62. In evaluating the Cabral model in the context of the European Communities' causation arguments, it is important to note that, while the Cabral model may indicate that a causal link between the subsidies and the "event" (in this case, the price of Boeing LCA) is logically possible, it does not of itself indicate how plausible this logical possibility actually is. In other words, Professor Cabral's model necessarily *assumes* (on the basis of the assumptions embedded in the model) that there is a positive relationship between the receipt of the subsidies and the lower Boeing prices: It does not, however, purport to test that proposition. However, if the Panel were to accept the assumptions embedded in the model (including those made regarding the values of the different parameters), then the Cabral model could assist in *quantifying* the impact of the subsidies on Boeing's prices.

2. The role of the Cabral model in the European Communities' "price effects" arguments

63. In its first written submission, the European Communities introduces the Cabral Report by saying that, in addition to ITR's calculations of the "magnitudes" of the subsidies benefiting Boeing aircraft, it relies on Professor Cabral's work to "demonstrate that during 2004-2006, the US subsidies caused Boeing's 787, 737NG and 777 prices to be significantly lower."[4243] Later in that submission, the European Communities says that its causation argument; namely, that Boeing has a strong *incentive* to use a portion of the additional non-operating cash flow from the $16.9 billion in untied

[4240] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, para. 54. Such a model would consider the following factors: sellers' costs, the component of the buyer's preference that is known by the sellers, and the component of the buyer's preference that is known only by the buyer.

[4241] Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 54-55.

[4242] Luís Cabral, Investment and Pricing Behaviour Model: Literature Review of Theories Dealing with Strategic Interaction in Duopolies, July 2009, Exhibit EC-1435, para. 30.

[4243] European Communities' first written submission, para. 1007.

subsidies to lower its LCA prices is *confirmed* by Professor Cabral's analysis.[4244] The European Communities then describes Professor Cabral as providing an "economic analysis of *why* US subsidies received by Boeing that are not directly tied to production or sales volumes of specific aircraft … strongly influence Boeing's investment and pricing decisions."[4245] The European Communities describes the conclusions of Professor Cabral's model as being that subsidies that increase Boeing's non-operating cash flow have a direct and substantial effect on Boeing's investment and pricing behaviour.[4246] This suggests that the European Communities seeks to use Professor Cabral's model as additional evidence in support of its causation argument (that the subsidies caused Boeing to lower its LCA prices) as well as to quantify the extent of the price reductions.

64. In its second written submission, the European Communities describes the report prepared by Professor Cabral as "offer{ing} quantitative estimates" of the extent to which subsidies that increase Boeing's non-operating cash flow led Boeing to lower its LCA prices.[4247] However, it then describes Professor Cabral's contribution in the following terms:

> "In his report, Professor Cabral developed a model to determine how Boeing spends additional cash, *i.e.*, how it allocates the subsidy funds it receives between investments in future firm value and distributions to shareholders. He *concluded* that the majority of the US subsidies are channeled into investments in firm value, *and* result in price effects of approximately the same magnitude as the amount of the subsidies."[4248]

65. The European Communities' discussion of the Cabral Report in its second written submission concludes with the statement that the "price effects *determined* by Professor Cabral, therefore, stand and support the EC arguments and other evidence demonstrating the adverse effects caused by the US subsidies."[4249]

66. As indicated by the foregoing, the Cabral Report appears to be relevant to the European Communities' causation arguments in two ways. The first is to support its general (and critical) argument that Boeing used the subsidies to lower its LCA prices (i.e. supporting the European Communities' principal contentions that the conditions of competition in the LCA market, coupled with the magnitude of the subsidies, created incentives, opportunities and the ability for Boeing to lower its LCA prices). The second is to quantify the extent to which the subsidies flowed through to lower Boeing LCA prices. Moreover, Professor Cabral's analysis of the ways in which a firm like Boeing will use subsidies that are not directly tied to the production or sale of specific LCA mirrors and provides the theoretical underpinnings of the European Communities' key arguments about why and how, given the pricing incentives related to LCA production and sale, and the nature of competition in the LCA market, Boeing will use a significant portion of the subsidies to lower the prices of its LCA and increase market share.

3. Principal weaknesses of Professor Cabral's model as support for the European Communities' arguments that Boeing uses the subsidies to lower the prices of its LCA

67. The Panel here sets forth what we see as the principal flaws in Professor Cabral's analysis of the ways in which the category of subsidies that he identifies as development subsidies allegedly

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[4244] European Communities' first written submission, para. 1309.
[4245] European Communities' first written submission, para. 1309. Emphasis added.
[4246] European Communities' first written submission, para. 1309.
[4247] European Communities' second written submission, para. 753.
[4248] European Communities' second written submission, para. 753. Emphasis added.
[4249] European Communities' second written submission, para. 785. Emphasis added.

affect Boeing's LCA pricing behaviour. The Panel does not address the many criticisms made by the United States and its consultants of Professor Cabral's estimates of particular parameters, as in our view, these factors primarily affect the quantification of the "price effects".

(a) Consistency with Boeing's pricing behaviour in the LCA markets between 2000 and 2006

68. In the Panel's view, the most apparent weakness in Professor Cabral's analysis, in so far as it purports to *demonstrate* that Boeing would use a significant proportion of each additional dollar of subsidy to engage in aggressive pricing of its LCA, is the fact that it is not supported by empirical evidence concerning Boeing's actual pricing behaviour between 2000 and 2006. The Panel recalls that Professor Cabral's theory as to the way in which the receipt of "development subsidies" would affect Boeing's pricing behaviour is that Boeing would directly and immediately apply a significant proportion of any such subsidies that it receives in any year to "investments" in aggressive pricing in order to capture market share from Airbus. The Panel accepts evidence that Boeing changed its pricing policy in late 2004/2005 and became much more "aggressive" on price. Indeed, the Panel notes that the European Communities' version of events in the LCA markets between 2000 and 2006 is that Boeing suddenly became much more aggressive on price in late 2004, with the appointment of a new sales manager and a clear change in pricing policy.[4250] However, the very suggestion that Boeing could suddenly decide to change its policy and become more aggressive on price in 2004/2005 (using the subsidies to do so) appears to contradict Professor Cabral's theory about how Boeing would optimally be applying additional dollars of subsidies to "investments" in aggressive pricing, unless it were possible to show that from 2004/2005 onwards, the amount of subsidies paid to Boeing increased significantly (which it did not).

69. When asked by the Panel to explain this apparent inconsistency, the European Communities replied that Cabral's model reflects Boeing's "average" behaviour with respect to its use of the subsidies over the 2000 – 2006 period. According to the European Communities, the fact that post-2004, Boeing used a greater portion of subsidies than previously is consistent with a model that assesses Boeing's "average" behaviour during 2004 – 2006.[4251] The European Communities also does not dispute that Boeing may contribute its own funds – in addition to the subsidies it receives – to invest in lower pricing. According to the European Communities, Boeing's 2004 decision to dramatically reduce its pricing for, *inter alia*, the 737NG was made possible partly by "greater use of these subsidies" and partly by Boeing's decision to use its own funds to reduce prices.[4252] The European Communities argues that, for purposes of assessing the European Communities' arguments and evidence, it does not matter which of the two factors made the greatest contribution to Boeing lowering its prices – what is important is the "marginal effect of the US subsidies on Boeing's price."[4253]

70. The United States argues that this explanation by the European Communities merely illustrates the contradictions between reality and theory. The United States recalls that the European Communities, in its first written submission, argued that the price effects that increase Boeing's non-operating cash flow are *immediate and direct* for both the case of investment in aggressive pricing of new planes (via pricing down the learning curve) and for aggressive pricing of sales of mature

[4250] European Communities' confidential oral statement at the first meeting with the Panel, paras. 53 and 75-76; Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 117. Both parties appear to accept that Boeing adopted a more aggressive pricing policy in late 2004 or early 2005 (they disagree somewhat as to the precise timing). See, for example, United States' comments on the European Communities' response to question 86, para. 307.

[4251] European Communities' response to question 86, para. 394.

[4252] European Communities' response to question 86, para. 396.

[4253] European Communities' response to question 86, para. 397.

aircraft.[4254] The United States argues that, in its attempt to explain the consistency of Professor Cabral's analysis with post-2004 market events, the European Communities admits that Boeing may significantly change its distribution of the amount of the alleged non-operating cash flow benefit among various spending options. The United States notes that it is *only* through Professor Cabral's assumption that Boeing uses any subsidy cash in a *fixed proportion* between investments leading to lower LCA prices and payments to shareholders that Professor Cabral can claim that the alleged subsidies that increase Boeing's non-operating cash flows will *always* affect Boeing's prices. Otherwise, Professor Cabral's model would provide no reason why, at any given time, the proportion of the subsidy invested in lower pricing would not be zero, and the proportion passed onto shareholders would not be 100 per cent.[4255] Thus, according to the United States, Professor Cabral's model positively precludes that Boeing may invest a somewhat higher percentage of its subsidies in pricing down its LCA in some years, but not in others.

71. The United States also argues that if Professor Cabral's theory that "aggressive pricing" is a rational "investment" were true, one would have expected that in 2000 – 2004 Boeing would have been pricing aggressively to take market share from Airbus, instead of resisting price reductions and losing market share. The European Communities argues that subsidies to Boeing also caused adverse effects during the 2001 – 2003 period, however, a number of factors "prevented Boeing from maximizing the effects of these subsidies to increase its market share at Airbus' expense."[4256] These factors included: Boeing's poor customer relationships, the fact that its order book was dominated by distressed U.S. airlines, Boeing's failure to launch new LCA and its decision to compete with leasing companies. The European Communities says that, by late 2004, "these factors had changed, and the full effects of the subsidies were again felt by Airbus."[4257]

72. The Panel is persuaded by the United States' criticism of the Cabral model in this regard. To the extent that Professor Cabral's analysis purports to demonstrate, not just that it is "logically possible" that Boeing used the "development subsidies" to lower the prices of its LCA, but that Boeing *actually did* use the subsidies to lower the prices of its LCA, we would expect that the implications of Professor Cabral's theory about how Boeing would behave in the LCA markets would, at least to some degree, be borne out by events that occurred in those markets. Professor Cabral himself said, in his discussion of the various models of oligopoly behaviour that he could have potentially chosen for the basis of his model, that while it may be difficult to choose a model based on purely theoretical grounds, one can ask whether their assumptions are reasonable given the industry at issue and whether their predicted outcomes are consistent with the reality of that industry and the actual market outcomes.[4258] The Panel considers that the same can be said of Professor Cabral's model, and we do not consider that his model and its predicted outcomes are consistent with the evidence as to pricing behaviour and market share in the LCA industry between 2000 and 2006.[4259]

[4254] United States' comments on the European Communities' response to question 86, para. 303; referring to European Communities' first written submission, para. 1322.
[4255] United States' comments on the European Communities' response to question 86, para. 304.
[4256] European Communities' response to question 85, para. 390.
[4257] European Communities' response to question 85, para. 391.
[4258] L. Cabral, Investment and Pricing Behaviour Model: Literature Review of Theories Dealing with Strategic Interaction in Duopolies, July 2009, Exhibit EC-1436, para. 11.
[4259] See also paras. 74 and 75 in (c) below.

(b) Are "untied" subsidies the functional equivalent of additional cash to Boeing?

73. Professor Cabral's analysis rests on the assumption that "in kind" subsidies such as the NASA R&D subsidies are fungible with cash.[4260] The European Communities and Professor Cabral both argue that this is because the R&D subsidies lower Boeing's costs of conducting R&D and thereby free up additional cash that Boeing can use to engage in aggressive pricing. We are not persuaded that the nature of the particular aeronautics R&D subsidies at issue in this dispute, particularly in the light of NASA's role in supporting long-term, high risk aeronautical R&T, is such that it is appropriate to analyse the effects of the aeronautics R&D subsidies as being equivalent to the receipt of additional cash.[4261]

(c) Cabral's theory as to how the subsidies influence Boeing's pricing of its LCA is at odds with evidence as to how Boeing sets its LCA prices

74. Even assuming that it is appropriate to analyse the effects of the aeronautics R&D subsidies as cost savings that generate additional cash for Boeing, the Panel is not persuaded that such cost savings influence Boeing's LCA pricing in the way suggested by Professor Cabral. Both Airbus and Boeing officers acknowledge that the LCA prices they set relate to the development costs for a particular LCA programme.[4262] However, Professor Cabral's analysis does not indicate how a reduction in Boeing's general costs (e.g. a reduction in Boeing's general R&D costs) would affect the development costs for a specific LCA programme. Moreover, as shown by the evidence, the nature of the LCA market is such that LCA prices are also influenced by the prices of competing LCA.[4263] In short, we consider that the relationship between cost savings arising from the receipt of development subsidies and LCA prices is less direct than is suggested by Professor Cabral.

75. A similar criticism relates to Professor Cabral's analysis of the effects of learning curve efficiencies on Boeing's LCA pricing. The United States asserts that, because learning curve efficiencies are factored into a producer's projected costs at the time of the launch of an aircraft programme, there is no basis for any expectation of subsequent, campaign-specific learning curve adjustments to price. The Panel is satisfied that the evidence submitted by the United States in

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[4260] Luís M. B. Cabral, Impact of Development Subsidies Granted to Boeing, New York University and CEPR, March 2007, Exhibit EC-4, p. 41; Luís M. B. Cabral, Response to the U.S. Criticisms of my Analysis of The impacts of Development Subsidies Granted to Boeing", 14 November 2007, Exhibit EC-1182, paras. 32-33. The Panel observes that the proof of the fungibility of "in-kind" subsidies with cash contained in Annex A.2 of Professor Cabral's March 2007 report is simply a rewriting of the budget constraint of the firm in a highly abstract model.

[4261] See also paras. 7.1760, 7.1831 of the Report.

[4262] See, e.g. Statement of Clay Richmond, Exhibit US-275 HSBI; According to Richmond, at the time of the decision to launch an LCA programme, Boeing bases its pricing on (i) the price it believes the LCA will command over its lifetime, and (ii) the projected volume of sales for that LCA, against (iii) the costs of the LCA programme (including non-recurring investments and recurring costs such as anticipated learning curve efficiencies). Richmond says that once the launch decision is made, pricing is "market driven" in the sense that Boeing aims to achieve the highest market value for its products in light of market conditions. See also Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 105.

[4263] See, e.g. Christian Scherer, Commercial Aspects of the Aircraft Business from the Perspective of a Manufacturer, March 2007, Exhibit EC-11 (BCI), para. 105; Greenwald Paper, Exhibit US-8, p. 6. European Communities' second written submission, Full Version HSBI Appendix, para. 86: "As a profit maximizer, Airbus has no incentive to offer very low pricing. Thus, in competitive sales campaigns, Airbus pricing is, to a large extent, the result of Boeing's behaviour."

support of this assertion is credible and consistent with other evidence as to how Boeing sets prices for its LCA. [4264]

4. Conclusion

76. In conclusion, Professor Cabral's model does not support the existence of a causal link between the receipt by Boeing of "development subsidies", and lower Boeing LCA pricing. The Panel is not convinced that the assumptions underlying Professor Cabral's model are an appropriate representation of Boeing's actual commercial behaviour. As we are unable to accept the assumptions on which the model is based, we do not consider the model to provide evidentiary support for the European Communities' argument that Boeing's receipt of the subsidies enables it to lower the prices of its LCA.

[4264] See, e.g. Statement of Clay Richmond, Exhibit US-275 HSBI; Jordan and Dorman Report, Exhibit US-3, pp. 14-15.

BCI deleted, as indicated **[***]**

VIII. CONCLUSIONS AND RECOMMENDATION

A. CONCLUSIONS

8.1 We recall that in this dispute, the claims of the European Communities with respect to the challenged measures fall into two categories. First, the European Communities claims that two of the alleged subsidies, namely the tax breaks provided by the U.S. Federal Government pursuant to legislation concerning foreign sales corporations and exclusion of extraterritorial income and the tax incentives provided by the State of Washington under the legislation adopted in 2003, are prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement. Second, the European Communities claims that all of the alleged subsidies are actionable under the SCM Agreement and that by using these subsidies the United States causes adverse effects to the interests of the European Communities, in violation of Article 5(c) of the SCM Agreement.

8.2 With respect to the European Communities' prohibited subsidy claims under Articles 3.1(a) and 3.2 of the SCM Agreement, we conclude that:

(a) the FSC/ETI measures that have been challenged by the European Communities and that were in force at the time of the Panel's establishment are inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement;

(b) the European Communities has not demonstrated that the Washington State tax measures provided for in HB 2294 are inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.

8.3 With respect to the European Communities' adverse effects claims under Article 5(c) of the SCM Agreement:

(a) we conclude that the United States causes serious prejudice to the interests of the European Communities within the meaning of Articles 5(c) and 6.3(b) and 6.3(c) of the SCM Agreement in that:

(i) the effects of the NASA and DOD aeronautics R&D subsidies are significant price suppression, significant lost sales and threat of displacement and impedance of exports from third country markets, with respect to the 200 – 300 seat wide-body LCA product market;

(ii) the effects of the FSC/ETI subsidies and the B&O tax subsidies provided by the State of Washington under HB 2294 are significant price suppression, significant lost sales and displacement and impedance of exports from third country markets, with respect to the 100-200 seat single-aisle LCA product market;

(iii) the effects of the FSC/ETI subsidies and the B&O tax subsidies provided by the State of Washington under HB 2294 and by the City of Everett are significant price suppression, significant lost sales and displacement and impedance of exports from third country markets, with respect to the 300-400 seat wide-body LCA product market;

(b) we exercise judicial economy with respect to the European Communities' claim that violation of the 1992 Agreement constitutes serious prejudice to the European Communities' interests within the meaning of Article 5(c) of the SCM Agreement.

BCI deleted, as indicated **[***]**

8.4 Under Article 3.8 of the DSU, in cases where there is an infringement of the obligations assumed under a covered agreement, the action is considered prima facie to constitute a case of nullification or impairment. We conclude that, to the extent that the United States has acted inconsistently with the SCM Agreement, it has nullified or impaired benefits accruing to the European Communities under that Agreement.

B. RECOMMENDATION

8.5 Article 4.7 of the SCM Agreement provides that, having found a measure in dispute to be a prohibited subsidy:

> "the Panel shall recommend that the subsidizing Member withdraw the subsidy without delay. In this regard, the panel shall specify in its recommendation the time period within which the measure must be withdrawn."

8.6 The Panel has found that the European Communities has demonstrated that FSC/ETI and successor act subsidies to Boeing are export subsidies that are prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement. As to whether the Panel should make a recommendation under Article 4.7 of the SCM Agreement with regard to the subsidies which it has found to be prohibited under Article 3, there are two basic considerations that the Panel needs to take into account. First, the FSC/ETI measure in force at the time of the Panel's establishment has been substantially changed during the course of the present proceedings and indeed it appears that the measure is no longer in force with respect to Boeing.[4265] The Panel considers that it is well established in WTO dispute settlement practice that when a measure has expired, it is appropriate for a panel to refrain from making a recommendation with respect to such a measure.[4266] Second, to the extent that FSC/ETI tax benefits remained applicable to Boeing at the time of the establishment of this Panel, pursuant to the transition and grandfather clauses of the AJCA, the Panel notes that the panel and Appellate Body reports in *US – FSC (Article 21.5 – ECII)* concluded that the recommendation made by the panel in *US – FSC* remained operative. The Panel considers it important not to disturb this recommendation. A new recommendation under Article 4.7 of the SCM Agreement would not add to the legal force of the existing recommendation. The findings made in prior cases regarding the legal provisions as such necessarily imply that the application of these provisions in individual cases was also inconsistent with Article 3. The obligation of the United States to withdraw the prohibited subsidies at issue thus also entails an obligation to cease applying the measures in individual cases. If anything, a new recommendation could detract from the legal force of the existing obligation insofar as it would give rise to a new period for implementation.[4267]

[4265] We note that the European Communities argues that there has been no "final resolution" as to whether FSC/ETI benefits will continue. We also note, however, that this issue is limited to certain transactions that are authorized under the TIPRA provisions as interpreted in the December 2006 memorandum of the Internal Revenue Service and that the European Communities has not provided sufficient evidence that Boeing has actually made use of those provisions.

[4266] See, for example, Appellate Body Report, *US – Certain EC Products*, paras. 81-82. The panel in *EC – Approval and Marketing of Biotech Products* concluded that "WTO jurisprudence supports the inference that panels are to avoid making recommendations which would apply to measures that are no longer in existence or have been amended." Panel Report, *EC – Approval and Marketing of Biotech Products*, para. 7.1316.

[4267] A recommendation by this Panel under Article 4.7 of the SCM Agreement would provide the United States with a new period within which to withdraw the subsidy provided to Boeing. The implication would be that while the United States has since November 2000 been under an obligation to withdraw the FSC measures at issue, with respect to the application of those measures to Boeing, the obligation to withdraw the subsidy would come into existence only upon completion of the present proceeding. Such a result would be fundamentally illogical.

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8.7 In the light of the foregoing, the Panel refrains from making a recommendation under Article 4.7 of the SCM Agreement. To the extent that the United States has not already withdrawn the FSC/ETI export subsidies to Boeing, the Panel notes the conclusion of the Panel in *US - FSC (Article 21.5 – ECII),* which was upheld by the Appellate Body, that the recommendation made by the Panel in the dispute in *US – FSC* continued to be "operative".[4268]

8.8 Article 7.8 of the SCM Agreement provides that:

> "Where a panel report or an Appellate Body report is adopted in which it is determined that any subsidy has resulted in adverse effects to the interests of another Member within the meaning of Article 5, the Member granting or maintaining such subsidy shall take appropriate steps to remove the adverse effects or shall withdraw the subsidy."

8.9 Accordingly, in the light of our conclusions with respect to adverse effects set out above, we recommend that, upon adoption of this Report, or of an Appellate Body report in this dispute determining that any subsidy has resulted in adverse effects to the interests of the European Communities, the United States "take appropriate steps to remove the adverse effects or ... withdraw the subsidy".

8.10 Article 19.1 of the DSU provides that a panel "may" suggest ways in which a recommendation could be implemented. It is well established that Article 19.1 does not oblige panels to make a suggestion. In this case, neither party has requested that the Panel make any such suggestion. Accordingly, we make no suggestions concerning the steps that might be taken to implement this recommendation.

[4268] See, for example, Panel Report, *US – FSC (Article 21.5 – ECII)*, para. 8.2.

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ANNEX A

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BCI deleted, as indicated **[***]**

ANNEX A*

UNITED STATES — MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT

Request for Consultations by the European Communities

Addendum

The following communication, dated 27 June 2005, from the delegation of the European Communities to the delegation of the United States and to the Chairman of the Dispute Settlement Body, is circulated in accordance with Article 4.4 of the DSU.

The European Communities refers to the United States' statement at the meeting of the Dispute Settlement Body ("DSB") on 13 June concerning the European Communities' request for the establishment of a Panel in the above case, where you asserted that 13 of the 28 subsidy programs referenced in the panel request were not listed in the consultation request of 6 October 2004 (circulated as document WT/DS/317/1 on 12 October 2004) and cannot be the subject of panel proceedings.

The European Communities cannot agree with this contention but is prepared to pursue consultations on the issues raised in these proceedings in order to clarify and, if possible, resolve them, it being understood that this is without prejudice to the European Communities' legal position and rights.

Accordingly, the European Communities hereby requests consultations with the United States pursuant to Articles 4.1, 7.1 and 30 of the *Agreement on Subsidies and Countervailing Measures* ("*SCM Agreement*"), Article XXIII:1 of the General Agreement on Tariffs and Trade 1994 ("GATT 1994") and Article 4 of the Understanding on Rules and Procedures Governing the Settlement of Disputes ("DSU"). These consultations will be a continuation of those held on 5 November 2004 pursuant to the request for consultations of 6 October 2004.

The measures that are the subject of this request are prohibited and actionable subsidies provided to US producers of large civil aircraft[1] ("US LCA industry"), and in particular the Boeing Company and the McDonnell Douglas Corporation, prior to its merger with Boeing, including related legislation, regulations, statutory instruments and amendments thereto. The measures currently include the following:

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* This communication was originally circulated on 1 July 2005 as WT/DS317/1/Add.1-G/L/698/Add.1-G/SCM/D63/1/Add. 1. On 4 December 2006, a corrigendum was issued to add "second complaint" at the end of the title of the document and to add "WT/DS353/1" to the document number.

[1] In accordance with the *1992 Agreement between the European Communities and the Government of the United States of America concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft*, large civil aircraft ("LCA") includes all aircraft as defined in Article 1 of the GATT Agreement on Trade in Civil Aircraft, except engines as defined in Article 1.1(b) thereof, that are designed for passenger or cargo transportation and have 100 or more passenger seats or its equivalent in cargo configuration. Boeing produces or markets the following families of LCA: 717, 737, 747, 757, 767, 777, and 787.

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1. STATE AND LOCAL SUBSIDIES

US States and local authorities, where production and headquarter facilities of the US LCA industry are located, transfer in various ways economic resources to the US LCA industry. Such States and local authorities include, but are not limited to, those in the States of Washington, Kansas and Illinois.

These economic resources transferred to the US LCA industry include numerous financial incentives and other advantages effectuated, for example, through tax breaks, bond financing, fee waivers, lease arrangements, corporate headquarters relocation assistance, research funding, infrastructure measures and other benefits.

2. NASA SUBSIDIES

The National Aeronautics and Space Administration ("NASA") transfers economic resources to the US LCA industry, *inter alia*, by:

(i) allowing the US LCA industry to participate in research programmes, making payments to the US LCA industry under those programmes, or enabling the US LCA industry to exploit the results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ("LERD"), or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research. The following are examples of such NASA programmes:

- High Speed Research Program;
- Advanced Subsonic Technology Program;
- Aviation Safety Program/Aviation Safety & Security Program/Aviation Security & Safety Program;
- Quiet Aircraft Technology Program;
- High Performance Computing and Communications Program;
- Research & Technology Base Program;
- Advanced Composites Technology Program;
- Vehicle Systems Program;
- Materials and Structures Systems Technology Program;
- Aircraft Energy Efficiency Program, including Composite Primary Aircraft Structures, Transport Aircraft Systems Technology, and Advanced Composite Structures Technology Programs;

(ii) NASA Personnel and Institutional Support Costs Dedicated to US LCA Industry R&D;

(iii) NASA Independent Research & Development, and Bid & Proposal Reimbursements;

(iv) Use by the US LCA industry of research, test and evaluation facilities owned by the US Government, including NASA wind tunnels, in particular the Langley research centre;

(v) NASA procurement contracts.

3. DEPARTMENT OF DEFENSE SUBSIDIES

The Department of Defense ("DOD") transfers economic resources to the US LCA industry, *inter alia*, by:

(i) allowing the US LCA industry to participate in DOD-funded research, making payments to the US LCA industry for such research, or enabling the US LCA industry to exploit the

results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research, through, for example:

- Research, Development, Testing and Evaluation Programs;
- Independent Research & Development, and Bid & Proposal Reimbursements;

(ii) use by the US LCA industry of test and evaluation facilities owned by the US Government, including the Major Range Test Facility Bases;

(iii) procurement contracts including those for the purchase of goods from the US LCA industry for more than adequate remuneration, including in particular but not limited to the US Air Force contract with the Boeing corporation for the purchase of certain spare parts for its Airborne Warning and Control System (AWACS) aircraft, the Boeing KC-767A Tanker Program (lease contract), the National Polar-orbiting Operational Environmental Satellite System-Conical Microwave Imager Sensor, Boeing, the C-22 Replacement Program (C-40), Boeing, the KC-135 Programmed Depot Maintenance, Boeing/Pemco, the C-40 Lease and Purchase Program, Boeing, the C-130 avionics modernisation upgrade program, the C-17 H22 contract (Boeing BC-17X) and the US Navy contract with Boeing for the production and maintenance of 108 civil B-737 and their conversion into long-range submarine hunter Multi-Mission Aircraft.

The EC is also concerned about pending legislation, in particular draft amendment (Section 817 – Prohibition on Procurement from Beneficiaries of Foreign Subsidies) to the FY06 Defense Authorisation bill (HR 1815) (Hunter Amendment).

4. DEPARTMENT OF COMMERCE SUBSIDIES

The Department of Commerce ("DOC") transfers economic resources to the US LCA industry, *inter alia*, by allowing the US LCA industry to participate in the National Institute of Standards & Technology ("NIST") Advanced Technology Program, making payments to the US LCA industry under this research programme, or enabling the US LCA industry to exploit the results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research.

5. DEPARTMENT OF LABOR SUBSIDIES

The US Department of Labor transfers economic resources to the US LCA industry through, *inter alia,* the Aerospace Industry Initiative, an element of the president's High Growth Training Initiative, by granting to Edmonds Community College in the State of Washington funds for the training of aerospace industry workers.

6. FEDERAL TAX SUBSIDIES

The US Government transfers economic resources to the US LCA industry through the federal tax system, and in particular the following tax measures:

Sections 921-927 of the Internal Revenue Code (prior to repeal) and related measures establishing special tax treatment for "Foreign Sales Corporations" ("FSCs"), including individual applications; the FSC Repeal and Extraterritorial Income Exclusion Act of 2000, Pub. L. No. 106-519, including individual applications; and the American Jobs Creation Act of 2004, Pub. L. No. 108-357 including individual applications.

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The European Communities considers that these measures are inconsistent with the obligations of the United States under the following provisions:

(1) Articles 3.1 (a) and (b) and 3.2 of the *SCM Agreement*;

(2) Article 5 (a) and (c) of the *SCM Agreement*;

(3) Article 6.3 (a), (b), and (c) of the *SCM Agreement*;

(4) Article III:4 of the GATT 1994.

The European Communities is of the view that the measures referred to above are inconsistent with these provisions as such and as applied.

These measures are subsidies because in each instance there is a financial contribution by the US, State or local government and a benefit is thereby conferred within the meaning of Article 1.1(a) and (b) of the *SCM Agreement*. Each of them is specific to the US LCA industry within the meaning of Article 2 of the *SCM Agreement*.

The subsidies listed above are *de jure* or *de facto* export contingent, and contingent on the use of domestic over imported goods. The use of these measures causes adverse effects, *in particular*, serious prejudice or a threat of serious prejudice to the interests of the European Communities and material injury or threat of material injury to the European Community LCA industry:

– The effect of the measures is significant price undercutting by subsidized products of the US LCA industry as compared with the price of the European Community LCA products, or a threat thereof in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement*;

– The effect of the measures is significant price depression and price suppression in the markets for LCA products or a threat thereof in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement*;

– The effect of the measures is significant lost sales in the markets for LCA products or a threat thereof in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement*;

– The effect of the measures is to displace or impede exports of European Community LCA products in the US market or a threat thereof in violation of Articles 5(c) and 6.3(a) of the *SCM Agreement*;

– The effect of the measures is to displace or impede exports of European Community LCA products in third country markets or a threat thereof in violation of Articles 5(c) and 6.3(b) of the *SCM Agreement*;

– The effect of the measures is material injury to the European Community LCA industry or a threat thereof in violation of Article 5(a) of the *SCM Agreement*.

– The Hunter Amendment would also be incompatible, *inter alia*, with Article 23 of the DSU and Article 32 of the *SCM Agreement*.

Articles 4.2 and 7.2 of the *SCM Agreement* together require that requests for consultations include a statement of available evidence with regard to: (1) the existence and nature of the subsidies in question, and (2) the adverse effects to the interests of the European Communities. The available

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evidence is listed in the Annex to this letter. It combines the available evidence already contained in the letter of 6 October 2004 and additional evidence on the existence and nature of the subsidies that has become available since then.

The European Communities reserves the right to request the United States to produce further information and documents regarding the measures in question and their effect on the interests of the European Communities. The European Communities also reserves the right to address additional measures and claims under other WTO provisions.

My authorities look forward to receiving in due course a reply from the United States to this request. The European Communities is ready to consider with the United States mutually convenient dates to hold consultations in Geneva.

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ANNEX

STATEMENT OF AVAILABLE EVIDENCE

The evidence set out below is evidence available to the European Communities at this time regarding the existence and nature of the subsidies subject to this dispute, and the adverse effects caused by them to the interests of the European Communities. It is further supported by business confidential internal Airbus documents that are summarized below. The European Communities reserves the right to supplement or alter this list in the future, as required.

(a) Existence and Nature of the Subsidization

The evidence currently available to the European Communities includes the following documents. The European Communities' request for consultations describes in more detail the nature of these subsidies.

H.B. 2294, 58th Leg., 2d Spec. Sess. (Wash. 2003)

Final Bill Report, H.B. 2294

Memorandum of Agreement for Project Olympus between the Boeing Company and the State of Washington, dated as of 19 December 2003, *available at* http://www.effwa.org/pdfs/boeing_olympus.pdf

Project Olympus Master Site Development and Location Agreement between the Boeing Company and the State of Washington, dated as of 19 December 2003, *available at* http://www.effwa.org/pdfs/boeing_olympus.pdf

First Amendment to Project Olympus Master Site Development and Location Agreement between the Boeing Company and the State of Washington, dated as of 19 December 2003, *available at* http://www.effwa.org/pdfs/boeing_amended.pdf

News Release, Office of Governor Gary Locke, *Gov. Gary Locke Unveils Tax Incentives Package to Help Land Boeing 7E7, Outlines Project's Significant Economic Impact on State*, 9 June 2003, *available at* http://www.governor.wa.gov/press/press-view.asp?pressRelease=1372&newsType=1

Bryan Corliss, *7E7 Perks Go to Boeing*, HeraldNet, 20 December 2003, *available at* http://www.heraldnet.com/stories/03/12/20/17926878.cfm

Action Washington, Boeing 7E7 Site Agreement: Tax Adjustment Package, 6 December 2004, *available at* http://dir.cted.wa.gov/DesktopModules/Documents/DocumentsView.aspx?tabID=0&alias=ActionWA&lang=en&ItemID=146&MId=116&wversion=Staging

News Release, Office of Governor Gary Locke, *Gov. Locke, Business, Labor and Government Leaders Celebrate Delivery of State's 7E7 Proposal at 'Action Washington' Rally*, 20 June 2003, *available at* http://www.governor.wa.gov/press/press-view.asp?pressRelease=1379&newsType=1

News Release, Office of Governor Gary Locke, *Gov. Gary Locke Credits States Aggressive Proposal, Unified Effort in Winning 7E7 Bid*, 16 December 2003, *available at* http://www.governor.wa.gov/press/press-view.asp?pressRelease=1491&newsType=1

David Ammons, *Boeing 7E7 Deal Includes Perks*, The Olympian, 22 January 2004, *available at* http://www.theolympian.com/home/news/20040122/business/19223_Printer.shtml

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Our View: Sweet Boeing Deal Leaves a Sour Taste, King County Journal, 22 January 2004, *available at* http://www.kingcountyjournal.com/sited/story/html/154305

Press Release, Evergreen Freedom Foundation, *Details of Boeing Agreement Revealed*, 21 January 2004, *available at* http://www.effwa.org/press_releases/2004_01_21a.php

Open Letter to Washington Legislators from Bob Williams, President of EFF, 15 October 2004, *available at* http://www.effwa.org/commentaries/2004_10_15.php

John Gillie, *A Smooth Landing for the 7E7*, The News Tribune, 20 December 2004, *available at* http://www.thenewstribune.com/business/aerospace/story/4356715p-4127928c.html

Action Washington, *available at* http://dir.cted.wa.gov/portal/alias__ActionWA/lang__en/tabID__63/DesktopDefault.aspx

State of Washington, House and Senate Floor Debates, HB 2294, 10-11 June 2003

Executive Message Video, 20 June 2003, *available at* http://dir.cted.wa.gov/DesktopModules/Documents/DocumentsView.aspx?tabID=0&alias=ActionWA&lang=en&ItemID=177&MId=115&wversion=Staging

Washington State and the Boeing Company: Working Together for the Boeing 7E7 Dreamliner, Continuing Support and Collaborative Actions, September Presentation, Greenville, SC (September 2003)

Project Management Services Contract Between State of Washington Employment Security Department and Accenture, LLP, ESD Contract No. 05-415-PS, 5 May 2005, and related exhibits

Boeing's 747 Large Cargo Freighter Development on Plan, 22 February 2005, *available at* http://www.boeing.com/news/releases/2005/q1/nr_050222g.html

Snohomish County Airport, Aircraft Rate Schedule, effective 1 April 2002

Aircraft Models and Weights for Reporting All-Cargo Data to FAA, CY 2003 FAA ACAIS, February 2005, *available at* http://www.faa.gov/arp/planning/stats/2005/Cy04CargoAircraftEnc2.pdf

Joint Use Agreement between Snohomish County and the Boeing Company with regard to Boeing's use of the Snohomish County Airport (Paine Field), dated 17 June 1966, and all subsequent amendments and letter agreements in relation thereto, including those dated 14 July 1969, 25 August 1999, 7 December 2000, 17 December 2002, and any amendments pursuant to the Project Olympus Master Site Agreement

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Port Commission authorizes staff to go out to bid on Rail-Barge Facility, Port of Everett Press Release, 26 May 2005, *available at* http://www.portofeverett.com/press/2005_05_26BidRailBarg.shtml

City of Everett Ordinance 2759-04 (2004), amending Chapter 3.24 of the Everett Municipal Code

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Spreadsheets of top Everett manufacturing companies as compiled by the City of Everett Mayor's Office

Economic Revitalization and Reinvestment Act, S.B. 281, 2003 Sess., Reg. Sess., § 1(e) (Kan. 2003)

Supplemental Note on S.B. 281, *available at* http://www.kslegislature.org/supplemental/2004/SN0281.pdf

Richard Williamson, *Kansas Lands Piece of Jet, but Boeing May not Use the Bonds*, The Bond Buyer, 24 November 2003

Caroline Daniel, *Boeing Eyes Highest Handout in Bid to Soar Above Europe*, The Financial Times, 16 June 2003

Steve Painter, *Boeing Wichita Lands State Bonds*, The Wichita Eagle, 22 May 2003

Jean Hays, *Tweaks to Boeing Bill Pass Senate*, The Wichita Eagle, 7 May 2003

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Kansas Department of Commerce, Legislative Session Track for S.B. 281, *available at* http://kdoch.state.ks.us:82/NewsApp/news_legislative_updates_bill_display.jsp?id=1049378817480

Steve Painter and Molly McMillin, *State Sees Bonds as Boeing's Best Shot*, The Wichita Eagle, 2 April 2003

Kansas Development Finance Authority, Financial Statements Years Ended June 30, 2003 and 2002, and Independent Auditors' Report, *available at* http://www.kdfa.org/admin/UPLOADS/FinalAuditReport-FY2003.pdf

Now You Know: Who Received Incentives? The Wichita Eagle, 11 July 2004

City of Wichita, *IRB Overview, "Industrial Revenue Bond Issuance in the State of Kansas," available at* http://www.wichita.gov/Business/EconomicDevelopment/IRB/IRBOverview.htm

Minutes of Meetings of the Wichita City Council, 1995-2005, *available at* http://www.wichitagov.org/Government/MinutesAndAgendas/CityCouncil/

Lillian Zier Martell, The Wichita Eagle, 10 November 1999

David Dinell, *City approves Boeing industrial revenue bonds*, 7 November 2002, *available at* http://wichita.bizjournals.com/wichita/stories/2002/11/04/daily44.html

Karen Pierog, *Wichita Council OKs Tax Break for Boeing*, Reuters News Service, 10 November 1999

Council approves Boeing bonds, Wichita Business Journal, 14 November 2000, *available at* http://wichita.bizjournals.com/wichita/stories/2000/11/13/daily21.html

City of Wichita Industrial Revenue Bond Policy, Resolution No. R-98-151, *available at* http://www.wichita.gov/NR/rdonlyres/5C4F7504-A681-47EC-8369-F1AD7C400FAE/0/Industrial_Revenue_Bond_Policy_06d.pdf

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Wichita City Council Ordinance Nos. 46-401 (2004), 45-914 (2003), 45-495 (2002), 45-133 (2001), 44-811 (2000), 44-428 (1999), 44-102 (1998), 43-642 (1997), 43-325 (1996), 42-949 (1995), 42-553 (1994), 42-228 (1993), 41-916 (1992), and 41-592 (1991)

Bond transcripts for industrial revenue bonds issued on behalf of Boeing by the City of Wichita since 1979

Letters of intent for Industrial Revenue Bonds issued to the US LCA industry pursuant to actions of the Wichita City Council taken on 17 May 2005, 13 July 2004, 9 November 1999, 13 February 1996, 24 March 1992, 5 December 1989, 21 December 1982, 9 June 1981, and 23 October 1979

Tax Abatement Cost-Benefit Analyses for US LCA-industry industrial revenue bonds performed by the Center for Economic Development and Business Research, W. Frank Barton School of Business, Wichita State University

Council approves Onex IRBs, Wichita Business Journal, 17 May 2005, *available at* http://wichita.bizjournals.com/wichita/stories/2005/05/16/daily16.html

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Boeing Commercial Airplanes, Wichita Division, "Wichita Overview," *available at* http://www.boeing.com/commercial/wichita/commercial.htm

List maintained by the City of Wichita that contains information about all IRBs issued by the City of Wichita since 1979

City of Wichita/Sedgwick County Economic Development Incentives Policy, *available at* http://www.wichita.gov/NR/rdonlyres/5C4F7504-A681-47EC-8369-F1AD7C400FAE/0/Industrial_Revenue_Bond_Policy_06d.pdf

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Property Tax Exemption Applications filed with the Kansas Board of Tax Appeals by the Boeing Company from FY 1985 to present

Kansas Department of Revenue Ruling No. 19-1996-1, 1 July 1989

Kansas Private Letter Ruling No. P-2001-098, 30 September 2001

Kansas Private Letter Ruling No. P-1999-44, 26 February 1999

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Economic Development for a Growing Economy Tax Credit Act, Illinois Public Act 91-476, as amended

35 Ill. Comp. Stat. §§ 10/5 *et seq.*

35 Ill. Comp. Stat. §§ 5/211 *et seq.*

Corporate Headquarters Relocation Act, Illinois Public Act 92-0207, 20 Ill. Comp. Stat. §§ 611/1 *et seq.*

35 Ill. Comp. Stat. § 200/18-165

Ordinance of the County of Cook, Illinois, Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company (2001)

Ordinance of the City of Chicago, Illinois, Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company (2001)

The Boeing Company – Corporate Headquarters Relocation Grant Application (10 December 2001), prepared for the Illinois Department of Commerce and Community Affairs

John O'Connor, *Chicago's Boeing Incentives May Be Cut*, Denver Post, 24 May 2001

Tax Reimbursement Payment Agreement Between the City of Chicago and the Boeing Company, 1 November 2001, attached as Exhibit A to An Ordinance of the City of Chicago, Illinois Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company (ordinance *available at* http://egov.cityofchicago/webportal/COCWebPortal/COC_Editorial/ Boeing.txt)

Tax Reimbursement Payment Agreement Between the County of Cook and The Boeing Company, 1 November 2001

Boeing amended certification of real estate taxes paid in accordance with the Lease Agreement (attached to Boeing's 23 July 2003 request for Tax Reimbursement from the County of Cook)

Boeing certification of real estate taxes paid in accordance with the Lease Agreement (2 December 2003) (attached to Boeing's 29 January 2004 request for Tax Reimbursement Payment from the City of Chicago)

Statement of Robert Kunze (Deputy Commissioner, Department of Planning and Development, City of Chicago), Report of the Committee on Finance, Board of Commissioners of Cook County, 12 September 2001, *available at* http://www.co.cook.il.us/secretary/CommitteePages/ Meeting%20Reports/Finance%20Committee/2001/09-12-01.htm

Meeting of the Cook County Board of Commissioners: Post Agenda Report, 29 September 2001, *available at* http://www.cookctyclerk.com/agendas/2001/092001/092001meeting.pdf

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Cook County, Bureau of Finance, *Cashier's Check 456646*, 23 December 2003

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Lease Termination Compensation Agreement between 100 North Riverside, LLC and the City of Chicago, 15 January 2003

Jack Lyne, *US$63 million in Incentives, Last-Second Space Deal Help Chicago Land Boeing*, June 2001, *available at* www.conway.com/ssinsider/incentive/ti0106.htm

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(b) Serious Prejudice to the Interests of the European Communities

The European Communities has voluminous evidence that the subsidies granted to the US LCA industry have caused and continue to cause adverse effects through significant price suppression or depression of prices of LCA worldwide, significant price undercutting and significant lost sales by the Community industry in the market for LCA.

The evidence available includes the following materials:

Information regarding Airbus products, including at http://www.airbus.com/en/aircraftfamilies/ and http://www.boeing.com/commercial/flash.html, and related links and company information

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ANNEX B

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ANNEX B*

UNITED STATES — MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT

Request for the Establishment of a Panel by the European Communities

The following communication, dated 20 January 2006, from the delegation of the European Communities to the Chairman of the Dispute Settlement Body, is circulated pursuant to Article 6.2 of the DSU.

On 6 October 2004 the European Communities ("EC") requested consultations in the above matter with the United States ("US") pursuant to Articles 4.1, 7.1, and 30 of the *Agreement on Subsidies and Countervailing Measures* ("*SCM Agreement*"), Article XXIII:1 of the General Agreement on Tariffs and Trade 1994 ("GATT 1994"), and Article 4 of the *Understanding on Rules and Procedures Governing the Settlement of Disputes* ("DSU").[1] Consultations were held on 5 November 2004 but failed to resolve the dispute.

At the meeting of the Dispute Settlement Body ("DSB") on 13 June concerning the request for establishment of the panel in the above case[2] the US asserted without any explanation that 13 of the 28 subsidy programs referenced in the panel request were not listed in the consultation request of 6 October 2004 and could not be the subject of panel proceedings. The EC did not agree with this unfounded contention but expressed its readiness to continue consultations in order to clarify and resolve the issues, it being understood that this was without prejudice to the EC's legal position and rights. Accordingly, the EC on 27 June 2005 requested a continuation of the consultations held on 5 November 2004.[3]

The requested continued consultations were held on 3 August 2005 but failed to resolve the dispute.

Regrettably, the US decided to use its unfounded procedural objections further to undermine the Annex V proceeding initiated in this matter by the DSB on 23 September 2005. In particular, the US decided not to provide answers on measures that the US unilaterally determined to be outside the scope of the dispute. In addition, the US repeatedly blocked endeavours by the EC to have the Panel rule authoritatively on the scope of the dispute.

As a result, the EC has been deprived of its rights under the *SCM Agreement* to obtain the necessary information with respect to approximately half of the measures involved. This has seriously undermined the due process rights of the EC and its ability to prepare its case against the US.

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* This communication was originally circulated on 23 January 2006 as WT/DS317/5. On 4 December 2006, a corrigendum was issued to add "second complaint" at the end of the title of the document and to add "WT/DS353/2" to the document number.

[1] Circulated as document WT/DS317/1 on 12 October 2004.

[2] Circulated as document WT/DS317/2 on 3 June 2005.

[3] Circulated as document WT/DS317/1/Add.1 on 1 July 2005.

BCI deleted, as indicated **[***]**

To resolve this situation, the EC, in good faith and in an effort to resolve the dispute efficiently, hereby requests that a panel be established pursuant to Article 6 of the DSU; Article XXIII:2 of GATT 1994; and Articles 4, 7, and 30 of the *SCM Agreement* (to the extent that Article 30 incorporates by reference Article XXIII of GATT 1994) to consider the matter described below. This request is without prejudice to the EC's position that all the measures described below are already properly before the Panel that was established on 20 July 2005. The EC has already contacted the US in order to discuss how most efficiently to follow up on this request in the light of the developments described above and is prepared to continue these discussions with a view to ensuring a prompt and positive solution to this dispute.

* * * * * * *

This dispute concerns prohibited and actionable subsidies provided to and benefiting the US producers of large civil aircraft[4] (the "US LCA industry"), including, in particular, the Boeing Company ("Boeing") and McDonnell Douglas Corporation prior to its merger with Boeing. The measures are currently reflected in and derive from the following:

1. State and Local Subsidies

US States and local authorities, where research, development, production and headquarter facilities of the US LCA industry are located, transfer in various ways economic resources to the US LCA industry.

These economic resources include numerous financial incentives and other advantages effectuated, for example, through tax breaks, bond financing, fee waivers, lease arrangements, corporate headquarters relocation assistance, research funding, infrastructure measures and other benefits.

Such States and local authorities include, but are not limited to the States of Washington, Kansas and Illinois and local authorities therein.

a. State of Washington

Governmental authorities in the State of Washington, including municipalities and public bodies therein, such as Snohomish County, the Port of Everett, and the City of Everett, provide to the US LCA industry an incentive package of measures benefiting the development, production and sales of US LCA. These incentives include but are not limited to tax and other advantages reflected in or pursuant to, *inter alia*:

– Washington House Bill No. 2294 (2003);

– Memorandum of Agreement for Project Olympus between Boeing and the State of Washington of 19 December 2003;

[4] In accordance with the *1992 Agreement between the European Communities and the Government of the United States of America concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft*, large civil aircraft ("LCA") includes all aircraft as defined in Article 1 of the GATT Agreement on Trade in Civil Aircraft, except engines as defined in Article 1.1(b) thereof, that are designed for passenger or cargo transportation and have 100 or more passenger seats or its equivalent in cargo configuration. Boeing produces or markets the following families of LCA: 717, 737, 747, 757, 767, 777, and 787.

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– The Master Site Development and Location Agreement between Boeing and the State of Washington of 19 December 2003;

– The First Amendment to the Master Site Development and Location Agreement of 2 February 2004, and any subsequent amendments; and

– City of Everett Ordinance 2759-04 (2004), amending Chapter 3.24 of the Everett Municipal Code.

b. State of Kansas

Governmental authorities in the State of Kansas, including municipalities and public bodies therein, such as Sedgwick County, the City of Wichita, and local school districts, provide incentives, including bond financing, tax benefits and other advantages, to the US LCA industry, *inter alia*, through the following:

– Bond financing and payments pursuant to the Economic Revitalization and Reinvestment Act – Kansas Senate Bill No. 281 (2003), codified at K.S.A. §§ 74-50,136 *et seq.* (2004), as reflected in, *inter alia*:

- A Resolution of the Kansas Development Finance Authority Declaring an Intent to Issue its Revenue Bonds to Finance a Project on behalf of Mid-Western Aircraft Systems, Inc., adopted 9 June 2005;

- Incentive Agreement Between the Kansas Department of Commerce and Spirit Aerosystems Inc., dated as of 30 June 2005, signed by Spirit Aerosystems Inc. on 7 October 2005 and 10 October 2005, signed by the Kansas Department of Commerce on 11 October 2005;

- State of Kansas, State Finance Council Resolution No. 05-544, 18 October 2005; and

- Bond Resolution No. 222 Authorizing the Kansas Development Finance Authority To Issue Its Kansas Development Finance Authority Revenue Bonds (Spirit AeroSystems, Inc. Project) (adopted 5 December 2005).

– Property and sales tax abatements pursuant to K.S.A. § 79-201a, as amended, K.S.A. § 79-3606, as amended, and K.S.A. § 79-3640, as amended, associated with Industrial Revenue Bonds ("IRBs") issued for the financing of US LCA industry projects by the City of Wichita pursuant to K.S.A. §§ 12-1740 *et seq.*, as amended, including, but not limited to, those authorized by the following Ordinances of the Wichita City Council:

- Wichita City Council Ordinance No. 46-818 authorizing $80 million in IRBs for Spirit Aerosystems, Inc., dated 15 November 2005;

- Wichita City Council Ordinance No. 46-817 authorizing $29 million in IRBs for Boeing, dated 15 November 2005;

- Wichita City Council Ordinance No. 46-401 authorizing $67 million in IRBs for Boeing, dated 16 November 2004;

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- Wichita City Council Ordinance No. 45-914 authorizing $60 million in IRBs for Boeing, dated 18 November 2003;
- Wichita City Council Ordinance No. 45-495 authorizing $96 million in IRBs for Boeing, dated 19 November 2002;
- Wichita City Council Ordinance No. 45-133 authorizing $84 million in IRBs for Boeing, dated 20 November 2001;
- Wichita City Council Ordinance No. 44-811 authorizing $41 million in IRBs for Boeing, dated 21 November 2000;
- Wichita City Council Ordinance No. 44-428 authorizing $155 million in IRBs for Boeing, dated 23 November 1999;
- Wichita City Council Ordinance No. 44-102 authorizing $350 million in IRBs for Boeing, dated 8 December 1998;
- Wichita City Council Ordinance No. 43-642 authorizing $340 million in IRBs for Boeing, dated 25 November 1997;
- Wichita City Council Ordinance No. 43-325 authorizing $194 million in IRBs for Boeing, dated 26 November 1996;
- Wichita City Council Ordinance No. 42-949 authorizing $201 million in IRBs for Boeing, dated 14 November 1995;
- Wichita City Council Ordinance No. 42-553 authorizing $280 million in IRBs for Boeing, dated 15 November 1994;
- Wichita City Council Ordinance No. 42-228 authorizing $292 million in IRBs for Boeing, dated 30 November 1993;
- Wichita City Council Ordinance No. 41-916 authorizing $274 million in IRBs for Boeing, dated 8 December 1992; and
- Wichita City Council Ordinance No. 41-592 authorizing $206 million in IRBs for Boeing, dated 26 November 1991.

Letters of intent for IRBs for the US LCA industry, including, but not limited to, those issued pursuant to actions of the Wichita City Council taken on 17 May 2005, 13 July 2004, 9 November 1999, 13 February 1996, 24 March 1992, 5 December 1989, 21 December 1982, 9 June 1981, and 23 October 1979.

– Funding provided by the State of Kansas, Kansas Technology Enterprise Corporation ("KTEC"), and the Federal Government to the National Institute for Aviation Research at Wichita State University for collaborations with the US LCA industry.

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c. State of Illinois

Governmental authorities in the State of Illinois, including municipalities and public bodies therein, such as Cook County and the City of Chicago, provide incentives, including tax incentives, relocation assistance and other advantages, to the US LCA industry, including but not limited to:

- Tax credits from the State of Illinois pursuant to the Economic Development for a Growing Economy Tax Credit Act, Public Act 91-0476, as amended, 35 Ill. Comp. Stat. §§ 5/211 *et seq*., and 35 Ill. Comp. Stat. § 10/5-45;

- Reimbursement of relocation expenses and other benefits from the State of Illinois pursuant to the Corporate Headquarters Relocation Act, Public Act 92-0207;

- Payments from the State of Illinois pursuant to the Illinois Large Business Development Act, Ill. Rev. Stat. 1989, ch. 127, paras. 2710-1 *et seq.*, and 14 Ill. Admin. Code §§ 590.10 *et seq.*

- Payments from the State of Illinois pursuant to the Illinois Industrial Training Program, 20 Ill. Comp. Stat. § 605/605−800, and 56 Ill. Admin. Code §§ 2650.10 *et seq.*

- Payments from the State of Illinois pursuant to the Technology Challenge Grant Program, 20 Ill. Comp. Stat. §§ 700/2001 *et seq.*, and 14 Ill. Admin. Code §§ 545.110 *et seq.*

- Property tax abatements from Cook County pursuant to § 920 of the above-mentioned Corporate Headquarters Relocation Act, Public Act 92-0207, § 18 of the Property Tax Code, 35 Ill. Comp. Stat. §§ 200/1 *et seq.*, as amended, and an Ordinance of the County of Cook, Illinois Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company (2001);

- Property tax abatements from the City of Chicago pursuant to § 920 of the above-mentioned Corporate Headquarters Relocation Act, Public Act 92-0207, § 18 of the Property Tax Code, 35 Ill. Comp. Stat. §§ 200/1 *et seq.*, as amended, and an Ordinance of the City of Chicago, Illinois Approving Execution of a Tax Reimbursement Payment Agreement with the Boeing Company (2001); and

- Payments by the City of Chicago pursuant to the Lease Termination Compensation Agreement between 100 North Riverside, LLC, and the City of Chicago, 13 January 2001.

2. NASA Subsidies

The National Aeronautics and Space Administration ("NASA"), acting on the basis of the National Aeronautics and Space Act of 1958, Pub. L. No. 85-568, as amended, transfers economic resources on terms more favourable than available on the market or not at arm's length to the US LCA industry, *inter alia*, by:

BCI deleted, as indicated **[***]**

a. allowing the US LCA industry to participate in research programmes, making payments to the US LCA industry under those programmes, or enabling the US LCA industry to exploit the results thereof by means including but not limited to the foregoing or waiving of valuable patent rights, the granting of limited exclusive rights data ("LERD") or otherwise exclusive or early access to data, trade secrets and other knowledge resulting from government funded research. The following are examples of such NASA programmes:

(i) <u>High Speed Research Program</u>

- NASA Budget Requests for FY 1990 – FY 2001;
- NASA Appropriations Acts, Pub. L. No. 101-144 (FY 1990); Pub. L. No. 101-507 (FY 1991); Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993); Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995); Pub. L. No. 104-134 (FY 1996); Pub. L. No. 104-204 (FY 1997); Pub. L. No. 105-65 (FY 1998); Pub. L. No. 105-276 (FY 1999);
- High Speed Research Program Technology Transfer Control Handbook, April 1998.

(ii) <u>Advanced Subsonic Technology Program</u>

- NASA Budget Requests for FY 1992 – FY 2001;
- NASA Appropriations Acts, Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993); Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995); Pub. L. No. 104-134 (FY 1996); Pub. L. No. 104-204 (FY 1997); Pub. L. No. 105-65 (FY 1998); Pub. L. No. 105-276 (FY 1999);
- Advanced Subsonic Technology Program Technology Transfer Control Handbook, August 1998.

(iii) <u>Aviation Safety Program/Aviation Safety & Security Program/Aviation Security & Safety Program</u>

- NASA Budget Requests for FY 2000 – FY 2007;
- NASA Appropriations and Authorization Acts, Pub. L. No. 106-74 (FY 2000); Pub. L. No. 106-377 (FY 2001); Pub. L. No. 107-73 & Pub. L. No. 107-117 (FY 2002); Pub. L. No. 108-7 (FY 2003); Pub. L. No. 108-199 (FY 2004); Pub. L. No. 108-447 (FY 2005); Pub. L. No. 109-108 (FY 2006); Pub. L. No. 109-155 (FY 2007 – FY 2008).

(iv) <u>Quiet Aircraft Technology Program</u>

- NASA Budget Requests for FY 2000 – FY 2007;
- NASA Appropriations and Authorization Acts, Pub. L. No. 106-74 (FY 2000); Pub. L. No. 106-377 (FY 2001); Pub. L. No. 107-73 & Pub. L. No. 107-117 (FY 2002); Pub. L. No. 108-7 (FY 2003); Pub. L. No. 108-199 (FY 2004); Pub. L. No. 108-447 (FY 2005); Pub. L. No. 109-108 (FY 2006); Pub. L. No. 109-155 (FY 2007 – FY 2008).

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(v) High Performance Computing and Communications Program

- NASA Budget Requests for FY 1991 – FY 2003;
- NASA Appropriations Acts, Pub. L. No. 101-507 (FY 1991); Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993); Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995); Pub. L. No. 104-134 (FY 1996); Pub. L. No. 104-204 (FY 1997); Pub. L. No. 105-65 (FY 1998); Pub. L. No. 105-276 (FY 1999); Pub. L. No. 106-74 (FY 2000); Pub. L. No. 106-377 (FY 2001).

(vi) Research & Technology Base Program

- NASA Budget Requests for FY 1991 – FY 2004;
- NASA Appropriations Acts, Pub. L. No. 101-507 (FY 1991); Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993); Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995); Pub. L. No. 104-134 (FY 1996); Pub. L. No. 104-204 (FY 1997); Pub. L. No. 105-65 (FY 1998); Pub. L. No. 105-276 (FY 1999); Pub. L. No. 106-74 (FY 2000); Pub. L. No. 106-377 (FY 2001); Pub. L. No. 107-73 & Pub. L. No. 107-117 (FY 2002).

(vii) Advanced Composites Technology Program

- NASA Budget Requests for FY 1994 – FY 1997;
- NASA Appropriations Acts, Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995).

(viii) Vehicle Systems Program

- NASA Budget Requests for FY 2003 – FY 2007;
- NASA Appropriations and Authorization Acts, Pub. L. No. 108-7 (FY 2003); Pub. L. No. 108-199 (FY 2004); Pub. L. No. 108-447 (FY 2005); Pub. L. No. 109-108 (FY 2006); Pub. L. No. 109-155 (FY 2007 – FY 2008).

(ix) Materials and Structures Systems Technology Program, including advanced composites materials and structures research

- NASA Budget Requests for FY 1988 – FY 1995;
- NASA Appropriations Acts, Pub. L. No. 100-202 (FY 1988); Pub. L. No. 100-404 (FY 1989); Pub. L. No. 101-144 (FY 1990); Pub. L. No. 101-507 (FY 1991); Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993).

(x) Aircraft Energy Efficiency Program, including Composite Primary Aircraft Structures, Transport Aircraft Systems Technology, and Advanced Composite Structures Technology Programs

- NASA Budget Requests for FY 1976 – FY 1987;
- NASA Appropriations Acts, Pub. L. No. 94-116 (FY 1976); Pub. L. No. 94-378 (FY 1977); Pub. L. No. 95-119 (FY 1978); Pub. L. No. 95-392 (FY 1979); Pub. L. No. 96-

103 (FY 1980); Pub. L. No. 96-526 (FY 1981); Pub. L. No. 97-101 (FY 1982); Pub. L. No. 97-272 (FY 1983); Pub. L. No. 98-45 (FY 1984); Pub. L. No. 98-371 (FY 1985).

b. providing the services of NASA employees, facilities, and equipment to support the R&D programmes listed above and paying salaries, personnel costs, and other institutional support, thereby providing valuable services to the US LCA industry on terms more favourable than available on the market or not at arm's length:

- NASA Budget Requests for FY 1976 – FY 2007;

- NASA Appropriations and Authorization Acts, Pub. L. No. 94-116 (FY 1976); Pub. L. No. 94-378 (FY 1977); Pub. L. No. 95-119 (FY 1978); Pub. L. No. 95-392 (FY 1979); Pub. L. No. 96-103 (FY 1980); Pub. L. No. 96-526 (FY 1981); Pub. L. No. 97-101 (FY 1982); Pub. L. No. 97-272 (FY 1983); Pub. L. No. 98-45 (FY 1984); Pub. L. No. 98-371 (FY 1985); Pub. L. No. 99-160 (FY 1986); Pub. L. No. 99-500 & Pub. L. No. 99-591 (FY 1987); Pub. L. No. 100-202 (FY 1988); Pub. L. No. 100-404 (FY 1989); Pub. L. No. 101-144 (FY 1990); Pub. L. No. 101-507 (FY 1991); Pub. L. No. 102-139 (FY 1992); Pub. L. No. 102-389 (FY 1993); Pub. L. No. 103-124 (FY 1994); Pub. L. No. 103-327 (FY 1995); Pub. L. No. 104-134 (FY 1996); Pub. L. No. 104-204 (FY 1997); Pub. L. No. 105-65 (FY 1998); Pub. L. No. 105-276 (FY 1999); Pub. L. No. 106-74 (FY 2000); Pub. L. No. 106-377 (FY 2001); Pub. L. No. 107-73 & Pub. L. No. 107-117 (FY 2002); Pub. L. No. 108-7 (FY 2003); Pub. L. No. 108-199 (FY 2004); Pub. L. No. 108-447 (FY 2005); Pub. L. No. 109-108 (FY 2006); Pub. L. No. 109-155 (FY 2007 – FY 2008).

c. providing NASA Independent Research & Development, and Bid & Proposal Reimbursements:

- 48 CFR § 31.205-18;

- 14 CFR § 1274.204(g);

- 48 CFR §§ 9904.420 *et seq.*

d. allowing the US LCA industry to use the research, test and evaluation facilities owned by the US Government, including NASA wind tunnels, in particular the Langley Research Center.

e. entering into procurement contracts with the US LCA industry for more than adequate remuneration.

f. granting the US LCA industry exclusive or early access to data, trade secrets, and other knowledge resulting from government funded research pursuant, *inter alia*, to:

- Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information, section 4.5.7.1 (NPG 2200.2A);

- 48 CFR §§ 27.400 *et seq.*

g. allowing the US LCA industry to exploit the results of government funded research, including, but not limited to, the foregoing or waiving of valuable patent rights or rights in data as such, pursuant, *inter alia*, to:

BCI deleted, as indicated **[***]**

- 35 U.S.C. §§ 200 *et seq.*;
- 48 CFR §§ 27.300 *et seq.*;
- Memorandum to the Heads of Executive Departments and Agencies: Government Patent Policy, Pub. Papers 248 (18 February 1983);
- Executive Order 12591 (10 April 1987);
- 14 CFR §§ 1245.100 *et seq.*;
- 14 CFR §§ 1274.911 - 1274.914;
- 48 CFR §§ 1827.301 *et seq.*;
- 48 CFR §§ 27.400 *et seq.*

3. Department of Defense Subsidies

The Department of Defense ("DOD") transfers economic resources to the US LCA industry on terms more favourable than available on the market or not at arm's length, *inter alia*, by:

a. allowing the US LCA industry to participate in DOD-funded research, making payments to the US LCA industry for such research, or enabling the US LCA industry to exploit the results of such research, by means including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research, through, for example:

(i) A number of Research, Development, Test, and Evaluation ("RDT&E") Programs of the US Air Force, Navy, Army, and the Defense Advanced Research Projects Agency ("DARPA") including, but not limited to:

- Defense Research Sciences (PE# 0601102F)
- Materials (PE# 0602102F)
- Aerospace Flight Dynamics and Aerospace Vehicle Technologies (PE# 0602201F)
- Aerospace Propulsion (PE# 0602203F)
- Aerospace Sensors (PE# 0602204F)
- Dual Use Applications and Dual Use Science & Technology (PE# 0602805F)
- Advanced Materials for Weapon Systems (PE# 0603112F)
- Flight Vehicle Technology (PE# 0603205F)
- Aerospace Structures and Aerospace Technology Dev/Demo (PE# 0603211F)
- Aerospace Propulsion & Power Technology (PE# 0603216F)
- Flight Vehicle Technology Integration (PE# 0603245F)
- RDT&E For Aging Aircraft (PE# 0605011F)
- Manufacturing Technology/Industrial Preparedness (PE#
- 0603771F/0708011F/0708011N)
- C-17 (PE# 0401130F/0604231F)
- CV-22 (PE# 0401318F)
- Joint Strike Fighter (PE#0603800F/0603800N/0603800E/0604800F/0604800N)
- AV-8B Aircraft (PE# 0604214N)

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- Comanche (PE# 0604223A)
- F-22 (PE# 0604239F)
- B-2 Advanced Technology Bomber (PE# 0604240F)
- V-22 (PE# 0604262N)
- A-6 Squadrons (PE# 0204134N)
- F/A-18 Squadrons (PE# 0204136N)
- Dual Use Applications Program (including its predecessor, the Technology Reinvestment Project).

These Programmes are currently reflected in, *inter alia*:

- DOD RDT&E Budget Item Justification, Exhibits R-2, FY 1991 – FY 2007;

- DOD FY 1991 – FY 2007 Budgets for RDT&E Programs (Exhibit R-1), DOD Component Summary;

- 10 U.S.C. § 2521 (statutory basis for Manufacturing Technology Program);

- 10 U.S.C. § 2511 (statutory basis for Dual Use Programs);

- DOD Appropriations Acts, Pub. L. No. 101-511 (FY 1991); Pub. L. No. 102-172 (FY 1992); Pub. L. No. 102-396 (FY 1993); Pub. L. No. 103-139 (FY 1994); Pub. L. No. 103-335 (FY 1995); Pub. L. No. 104-61 (FY 1996); Pub. L. No. 104-208 (FY 1997); Pub. L. No. 105-56 (FY 1998); Pub. L. No. 105-262 (FY 1999); Pub. L. No. 106-79 (FY 2000); Pub. L. No. 106-259 (FY 2001); Pub. L. No. 107-117 (FY 2002); Pub. L. No. 107-248 (FY 2003); Pub. L. No. 108-87 (FY 2004); Pub. L. No. 108-287 (FY 2005); Pub. L. No. 109-148 (FY 2006).

(ii) providing Independent Research & Development, and Bid & Proposal Reimbursements.

- 10 U.S.C. § 2372;

- 48 CFR § 31.205-18;

- 48 CFR § 231.205-18;

- 48 CFR §§ 9904.420 *et seq.*;

- Department of Defense Directive Regarding IR&D, Number 3204.1 (10 May 1999);

- DOD Appropriations Acts, Pub. L. No. 101-511 (FY 1991); Pub. L. No. 102-172 (FY 1992); Pub. L. No. 102-396 (FY 1993); Pub. L. No. 103-139 (FY 1994); Pub. L. No. 103-335 (FY 1995); Pub. L. No. 104-61 (FY 1996); Pub. L. No. 104-208 (FY 1997); Pub. L. No. 105-56 (FY 1998); Pub. L. No. 105-262 (FY 1999); Pub. L. No. 106-79 (FY 2000); Pub. L. No. 106-259 (FY 2001); Pub. L. No. 107-117 (FY 2002); Pub. L. No. 107-248 (FY 2003); Pub. L. No. 108-87 (FY 2004); Pub. L. No. 108-287 (FY 2005); Pub. L. No. 109-148 (FY 2006).

b. allowing the US LCA industry to use research, test and evaluation facilities owned by the US Government, including the Major Range Test Facility Bases.

BCI deleted, as indicated **[*******]**

c. entering into procurement contracts, including those for the purchase of goods, from the US LCA industry for more than adequate remuneration, including in particular but not limited to the US Air Force contract with Boeing for the purchase of certain spare parts for its Airborne Warning and Control System (AWACS) aircraft, the National Polar-orbiting Operational Environmental Satellite System-Conical Microwave Imager Sensor, the C-22 Replacement Program (C-40), the KC-135 Programmed Depot Maintenance, the C-40 Lease and Purchase Program, the C-130 avionics modernisation upgrade program, the C-17 H22 contract (Boeing BC-17X), the US Navy contract with Boeing for the production and maintenance of 108 civil B-737 and their conversion into long-range submarine hunter Multi-Mission Aircraft, the Missile Defense Agency's Airborne Laser (ABL) Program, and the Army's Comanche Program.

d. by allowing the US LCA industry to exploit the results of government funded research, including, but not limited to, the foregoing or waiving of valuable patent rights or rights in data as such, pursuant, *inter alia*, to:

- 35 U.S.C. §§ 200 *et seq.*;
- 48 CFR §§ 27.300 *et seq.*;
- Memorandum to the Heads of Executive Departments and Agencies: Government Patent Policy, Pub. Papers 248 (18 February 1983);
- Executive Order 12591 (10 April 1987);
- 48 CFR §§ 227.303 *et seq.*;
- 48 CFR §§ 27.400 *et seq.*;
- 48 CFR §§ 227.7100 *et seq.*

4. National Institute of Standards & Technology (US Department of Commerce) Subsidies

The US Department of Commerce ("DOC") transfers economic resources to the US LCA industry on terms more favourable than available on the market or not at arm's length, through the Advanced Technology Program operated pursuant to the Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, as amended, and the American Technology Preeminence Act of 1991, Pub. L. No. 102-245 and 15 CFR §§ 295.1 *et seq.*, by allowing the US LCA industry to participate in this programme, making payments to the US LCA industry under this programme, or allowing the US LCA industry to exploit the results of this programme, including but not limited to the foregoing or waiving of valuable patent rights, and the granting of exclusive or early access to data, trade secrets and other knowledge resulting from government funded research. In particular, economic resources are transferred to the US LCA industry through a number of projects, including, but not limited to, the following:

- Project 93-01-0089 (CVD Diamond-Coated Rotating Tools for Machining Advanced Composite Materials);
- Project 95-12-0024 (An Agent-Based Framework for Integrated Intelligent Planning – Execution);
- Project 95-01-0108 (Precision Optoelectronics Assembly);

BCI deleted, as indicated **[***]**

- Project 91-01-0267 (Pre-competitive Advanced Manufacturing of Electrical Products);
- Project 97-05-0020 (Extended Enterprise Coalition for Integrated Collaborative Manufacturing Systems);
- Project 98-01-0168 (Hot Metal Gas Forming);
- Project 90-01-0126 (Solid-State Laser Technology for Point Source X-Ray Lithography);
- Project 95-02-0036 (Plasma-Based Processing of Lightweight Materials for Motor-Vehicle Components and Manufacturing Applications).

5. US Department of Labor

The US Department of Labor transfers economic resources to the US LCA industry on terms more favourable than available on the market or not at arm's length, through the Aerospace Industry Initiative, an element of the President's High Growth Training Initiative, under the authority of the Workforce Investment Act, Pub. L. No. 105-220 (1998), by granting to Edmonds Community College in the State of Washington funds for the training of aerospace industry workers associated with the Boeing 787.

6. Federal tax incentives

The US Government transfers economic resources to the US LCA industry through the federal tax system, and in particular through the following tax measures:

a. Sections 921-927 of the Internal Revenue Code (prior to repeal) and related measures establishing special tax treatment for "Foreign Sales Corporations" ("FSCs");

b. FSC Repeal and Extraterritorial Income Exclusion Act of 2000, Pub. L. No. 106-519; and

c. American Jobs Creation Act of 2004, Pub. L. No. 108-357.

* * * * * * *

The European Communities considers that the above measures are inconsistent with the obligations of the US under the following provisions:

(1) Articles 3.1(a), 3.1(b) and 3.2 of the *SCM Agreement*;

(2) Article 5(a) of the *SCM Agreement*;

(3) Articles 5(c), 6.3(a), 6.3(b) and 6.3(c) of the *SCM Agreement*;

(4) Article III:4 of the GATT 1994.

The European Communities is of the view that the above measures, reflected in the US, State, and local statutes, regulations, administrative procedures, and other programmes and policies as listed above, including any relevant subsequent amendments thereof or successory acts, are inconsistent with these provisions as such and as applied.

BCI deleted, as indicated **[***]**

The measures listed above are subsidies because in each instance there is a financial contribution by the US, State or local government, and a benefit is thereby conferred within the meaning of Article 1.1(a)(1) and (b) of the *SCM Agreement*. They benefit and will continue to benefit in the future the development, production, sale, and export of each of the individual subsidised LCA products of the US LCA industry. Each of the listed subsidies is specific to the US LCA industry within the meaning of Article 2 of the *SCM Agreement*.

The subsidies listed above are *de jure* or *de facto* export contingent, and contingent on the use of domestic over imported goods.

The use of these measures causes adverse effects – *i.e.*, material injury or threat of material injury to the European Community LCA industry – and serious prejudice including threat of serious prejudice to the interests of the European Communities within the meaning of Article 5(a) and (c) of the *SCM Agreement*, because, *inter alia*:

– The effect of the measures is material injury, or a threat thereof, in violation of Article 5(a) of the *SCM Agreement*;

– The effect of the measures is a significant price undercutting by subsidised products of the US LCA industry as compared with the price of competing European Community LCA products in the world, European Community, US, and third country markets where US and Community producers compete, or a threat thereof, in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement;*

– The effect of the measures is significant depression and suppression of the prices of competing European Community LCA products in the world, European Community, US, and third country markets where US and Community producers compete, or a threat thereof, in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement*;

– The effect of the measures is significant lost sales of competing European Community LCA products in the world, European Community, US, and third country markets where US and Community producers compete, or a threat thereof, in violation of Articles 5(c) and 6.3(c) of the *SCM Agreement*;

– The effect of the measures is to displace or impede exports of competing European Community LCA products in the US market, or a threat thereof, in violation of Articles 5(c) and 6.3(a) of the *SCM Agreement*;

– The effect of the measures is to displace or impede exports of competing European Community LCA products in third country markets, or a threat thereof, in violation of Articles 5(c) and 6.3(b) of the *SCM Agreement*.

The above measures are neither justified under any provision of a covered agreement, including the *Agreement on Trade in Civil Aircraft*, nor under the 1992 *Agreement between the European Communities and the Government of the United States of America concerning the application of the GATT Agreement on Trade in Civil Aircraft on trade in large civil aircraft.*

The European Communities requests that a panel be established with standard terms of reference, in accordance with Articles 4.4 and 7.4 of the *SCM Agreement* and Article 7 of the DSU.

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The European Communities asks that a special meeting of the Dispute Settlement Body be convened on Thursday 2 February 2006 and that this request for the establishment of a panel be placed on the agenda of that meeting.

Finally, the European Communities requests that the DSB, together with the establishment of the panel, initiate the procedures for developing information concerning serious prejudice under Annex V of the *SCM Agreement*. This request is without prejudice to the EC's position that all the measures described above are already properly before the Panel that was established on 20 July 2005 and therefore were covered by the Annex V proceeding initiated by the DSB on 23 September 2005. The EC is prepared to discuss together with the Representative designated by the DSB to serve the function of facilitating the information-gathering process, pursuant to paragraph 4 of Annex V of the *SCM Agreement*, Mr. Mateo Diego-Fernandez, and with the US, how the Annex V process can be pursued most efficiently.

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ANNEX C

WORKING PROCEDURES OF THE PANEL

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BCI deleted, as indicated **[***]**

ANNEX C

UNITED STATES — MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT — SECOND COMPLAINT – WORKING PROCEDURES FOR THE PANEL

(revised 13 September 2007)

1. In its proceedings the Panel shall follow the relevant provisions of the Dispute Settlement Understanding (DSU). In addition, the following working procedures shall apply.

2. The Panel shall conduct its internal deliberations in closed session. The parties to the dispute, and interested third parties, shall be present at meetings only when invited by the Panel to appear before it. The Panel may open its meetings with the parties to the public, subject to appropriate procedures to be adopted by the Panel after consulting with the parties. The Panel may open the third party session of its first substantive meeting to the public, subject to appropriate procedures to be adopted by the Panel after consulting with the parties and third parties.

3. The deliberations of the Panel and the documents submitted to it shall be kept confidential. Nothing in the DSU shall preclude a party to a dispute from disclosing statements of its own positions to the public. Members shall treat as confidential information submitted by another Member to the Panel which that Member has designated as confidential. Where a party to a dispute submits a confidential version of its written submissions to the Panel, it shall also, upon request of a Member, provide a non-confidential summary of the information contained in its submissions that could be disclosed to the public.

4. The Panel may adopt special procedures for the protection of certain confidential information as an annex to these working procedures, following consultation with and opportunity for comment by the parties on any proposed procedures.

5. Before the first substantive meeting of the Panel with the parties, the parties to the dispute shall transmit to the Panel written submissions in which they present the facts of the case, their arguments and their counter-arguments, respectively.

6. At its first substantive meeting with the parties, the Panel shall ask the European Communities to present its case. Subsequently, and at the same meeting, the United States will be asked to present its point of view. The parties will then be allowed an opportunity for final statements, with the European Communities presenting its statement first. Third parties will be asked to present their views thereafter at the separate session of the same meeting set aside for that purpose. Upon request, the parties will be allowed an opportunity to make written comments on the views presented by the third parties at this separate session.

7. All third parties which have notified their interest in the dispute to the Dispute Settlement Body shall be invited in writing to present their views during a session of the substantive meeting of the Panel set aside for that purpose. All such third parties may be present during the entirety of this session.

8. Formal rebuttals shall be made at a second substantive meeting of the Panel. The United States shall have the right to take the floor first, to be followed by the European Communities. The parties shall submit, prior to that meeting, written rebuttals to the Panel.

9. The Panel may at any time put questions to the parties and to the third parties and ask them for explanations either in the course of the substantive meeting or in writing. Answers to questions

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shall be submitted in writing by the date(s) specified by the Panel. Answers to questions after the first meeting shall be submitted in writing at the same time as the written rebuttals, unless the Panel specifies a different deadline.

10. The parties to the dispute and any third party invited to present its views shall make available to the Panel and the other party or parties a written version of their oral statements, preferably at the end of the meeting, and in any event not later than the day following the meeting. Parties and third parties are encouraged to provide the Panel and other participants in the meeting with a provisional written version of their oral statements at the time the oral statement is presented.

11. In the interest of full transparency, the presentations, rebuttals and statements shall be made in the presence of the parties. Moreover, each party's written submissions, including responses to questions put by the Panel, shall be made available to the other party.

12. The parties should provide the Secretariat with an executive summary of the claims and arguments contained in their written submissions and oral presentations. These executive summaries will be used by the Secretariat only for the purpose of assisting the Secretariat in drafting a concise arguments section of the Panel report so as to facilitate timely translation and circulation of the Panel report to the Members. They shall not serve in any way as a substitute for the submissions of the parties. The summaries of the first written submission and rebuttal written submission shall be limited to twenty (20) pages each, and the summaries of the oral statements at the meetings will be limited to five (5) pages each. The Panel may vary these page limits. Third parties are requested to provide the Panel with executive summaries of their written submissions and oral presentations, of no more than five (5) pages each. The executive summaries shall be submitted to the Secretariat within ten days of the original submission or presentation concerned. Paragraph 18 shall apply to the service of executive summaries.

13. A party shall submit any request for preliminary ruling not later than its first submission to the Panel. If the complaining party requests such a ruling, the respondent shall submit its response to the request in its first submission. If the respondent requests such a ruling, the complaining party shall submit its response to the request prior to the first substantive meeting of the Panel, at a time to be determined by the Panel in light of the request. Exceptions to this procedure will be granted upon a showing of good cause.

14. Each party shall submit all factual evidence to the Panel no later than during the first substantive meeting, except with respect to evidence necessary for purposes of rebuttals or answers to questions. Exceptions to this procedure will be granted upon a showing of good cause. The other party shall be accorded a period of time for comment, as appropriate, on any new factual evidence submitted after the first substantive meeting.

15. The parties to the dispute have the right to determine the composition of their own delegations. The parties shall have the responsibility for all members of their delegations and shall ensure that all members of the delegation act in accordance with the rules of the DSU and the Working Procedures of this Panel, particularly in regard to confidentiality of the proceedings. The parties as well as third parties shall provide a list of their delegation before each meeting to the Secretary to the Panel, Mr. Hiromi Yano (e-mail: hiromi.yano@wto.org).

16. To facilitate the maintenance of the record of the dispute, and to maximize the clarity of submissions, in particular the references to exhibits submitted by parties, parties shall sequentially number their exhibits throughout the course of the dispute. For example, exhibits submitted by the European Communities could be numbered EC-1, EC-2, etc. If the last exhibit in connection with the first submission was numbered EC-5, the first exhibit of its next submission thus would be numbered EC-6.

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17. Following issuance of the interim report, the parties shall have the time, as established by the timetable of the Panel, to submit written requests to review precise aspects of the interim report and to request a further meeting with the Panel. The right to request such a meeting must be exercised no later than at that time. Following receipt of any written requests for review, if no further meeting with the Panel is requested, the parties shall have the opportunity, within a time-period specified by the Panel, to submit written comments on the other party's written requests for review. Such comments shall be strictly limited to responding to the other party's written request for review.

18. The following procedures regarding service of documents shall apply:

a. Each party and third party shall serve all of its written submissions (including any separate requests for preliminary ruling and responses thereto), executive summaries and written versions of oral statements, directly on all other parties, and on third parties as appropriate, and confirm that it has done so at the time it provides those submissions to the Secretariat.

b. The parties and third parties should provide their submissions to the Secretariat by 5:30 p.m. on the deadlines established by the Panel, unless a different time is set by the Panel.

c. Unless the Panel indicates otherwise, the parties and third parties shall provide the Secretariat with ten paper copies of each of their written submissions. These copies shall be filed with the Dispute Settlement Registrar, Mr. Ferdinand Ferranco (office 2150).

d. The parties and third parties shall provide electronic copies of all submissions to the Secretariat at the time they provide their submissions, if possible in a format compatible with that used by the Secretariat. If the electronic version is provided by e-mail, it shall be addressed to DSRegistry@wto.org, and copied to XXXXX@wto.org,, XXXXX@wto.org, XXXXX@wto.org, XXXXX@wto.org and XXXXX@wto.org. If the electronic version is provided by diskette or CD, four copies shall be delivered to Mr. Ferdinand Ferranco (office 2150).

e. The Panel will endeavour to provide the parties with an electronic version of the descriptive part, the interim report and the final report, as well as of other documents as appropriate. When the Panel transmits to the parties or third parties both paper and electronic versions of a document, the paper version shall constitute the official version for the purposes of the record of the dispute.

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ANNEX D

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BCI deleted, as indicated **[***]**

ANNEX D

UNITED STATES — MEASURES AFFECTING TRADE IN LARGE CIVIL AIRCRAFT — SECOND COMPLAINT, (WT/DS353) – ADDITIONAL WORKING PROCEDURES FOR DS353 – PROCEDURES FOR THE PROTECTION OF BUSINESS CONFIDENTIAL INFORMATION AND HIGHLY SENSITIVE BUSINESS INFORMATION ("BCI/HSBI PROCEDURES")

(Last revised 11 February 2011)

I. GENERAL

The following Procedures apply to all business confidential information ("BCI") and highly sensitive business information ("HSBI") on the Panel record. These Procedures do not diminish the rights and obligations of the parties to request and disclose any information within the scope of the *SCM Agreement* and Article 13 of the *DSU*.

II. DEFINITIONS

For the purposes of these Procedures,

1. **"Approved Persons"** means:

   (a) Representatives or Outside Advisors of a Party, or Employees of the Secretariat, when designated in accordance with these procedures;

   (b) Panel members; and

   (c) PGE members or experts appointed by the Panel who in the opinion of the Panel require access to BCI and/or HSBI.

2. **"Business Confidential Information"** or "**BCI"** means any business information that a Party or Third Party has "Designated as BCI" regardless of whether contained in a document provided by a public or private body because it is not otherwise available in the public domain. Each Party and Third Party shall act in good faith and exercise restraint in designating information as BCI, and will endeavour to designate information as BCI only if its disclosure would cause harm to the originators of the information.

3. **"Conclusion of the Panel Process"** means the earliest to occur of the following events:

   (a) pursuant to Article 16.4 of the DSU, the Panel report is adopted by the DSB, or the DSB decides by consensus not to adopt the report;

   (b) a Party formally notifies the DSB of its decision to appeal pursuant to Article 16.4 of the DSU;

   (c) pursuant to Article 12.12 of the DSU, the authority for establishment of the Panel lapses; or

(d) pursuant to Article 3.6 of the DSU, a mutually satisfactory solution is notified to the DSB.

4. **"Designated as BCI"** means:

(a) for printed information, text that is set off with bold square brackets in a document clearly marked with the notation 'BUSINESS CONFIDENTIAL INFORMATION' and with the name of the Party or Third Party that submitted the information;

(b) for electronic information, characters that are set off with bolded square brackets (or with a heading with bolded square brackets on each page) in an electronic file that contains the notation 'BUSINESS CONFIDENTIAL INFORMATION', has a file name that contains the letters "BCI", and is stored on a storage medium with a label marked 'BUSINESS CONFIDENTIAL INFORMATION' and indicating the name of the Party or Third Party that submitted the information; and

(c) for uttered information, declared by the speaker to be "Business Confidential Information" prior to utterance.[1]

5. **"Designated as HSBI"** means:

(a) for electronic information, in characters that are set off with double bolded square brackets (or a heading with double bolded square brackets on each page) in an electronic file that contains the notation 'HIGHLY SENSITIVE BUSINESS INFORMATION', has a file name that contains the letters "HSBI", and is stored on a storage medium with a label marked 'HIGHLY SENSITIVE BUSINESS INFORMATION' and indicating the name of the Party or Third Party that submitted the information; and

(b) for uttered information, declared by the speaker to be "Highly Sensitive Business Information" prior to utterance.[2]

5*bis.* **"Designated Reading Room"** means a room, located on the premises of the WTO, where a Third Party BCI Approved Person may use to access Party's submission that contains Party-BCI.

6. **"Electronic information"** means any information stored in an electronic form (including but not limited to binary-encoded information).

7. **"Employee of the Secretariat"** means a person employed or appointed by the Secretariat who has been authorized by the Secretariat to work on the dispute, and includes translators and interpreters as well as any transcribers present at Panel meetings involving BCI and/or HSBI.

8. "**Highly Sensitive Business Information"** or "**HSBI"** means any business information regardless of whether contained in a document provided by a public or private body that a Party or Third Party has "Designated as HSBI" because it is not otherwise available in the public domain and its disclosure could, in the Party's or Third Party's view, cause exceptional harm to its originators. Each Party and Third Party shall act in good faith and exercise the utmost restraint in designating

[1] The erroneous failure by a speaker to make such a prior declaration shall not affect the designation of the BCI in question.

[2] The erroneous failure by a speaker to make such a prior declaration shall not affect the designation of the HSBI in question.

BCI deleted, as indicated **[***]**

information as HSBI. Each Party and Third Party may at any time designate as non-BCI/HSBI or as BCI information designated by that Party or Third Party as HSBI.

(a) The following categories of information may be Designated as HSBI:

(i) information indicating the actual selling or offered price of any large civil aircraft (LCA) manufacturer's products or services,[3] and, except as provided in subparagraph (d)(i) below, any graphs or other use of the data which reflect the movement of prices, pricing trends or actual prices of an LCA model or a family of LCA;

(ii) information gathered or produced in the context of LCA sales campaigns;

(iii) information concerning market forecasts, analyses, business plans and share/business valuations generated by LCA producers, consultants or investment banks with regard to LCA products; or

(iv) information concerning an LCA manufacturer's costs of production, including but not limited to data regarding pricing by suppliers.

(b) Each Party and Third Party may also designate as HSBI other categories of business information that is not otherwise available in the public domain and the disclosure of which could, in the Party's view, cause exceptional harm to its originators.

(c) Each Party and Third Party shall Designate as HSBI any information described in subparagraph (a) that pertains to LCA produced by an LCA manufacturer headquartered within the territorial jurisdiction of either of the Parties.

(d) The following categories of information may not be Designated as HSBI:

(i) aggregated pricing data for a particular LCA model or family of LCA within a particular market that is indexed (i.e., does not reflect actual prices but rather movements in prices off a base of 100 for a particular year). Such data shall be treated as BCI;

(ii) general legal conclusions based on HSBI (e.g., that HSBI demonstrates that a producer engaged in price undercutting). Such conclusions shall be treated as neither BCI nor HSBI; and

(iii) intergovernmental agreements and government decisions, other than information described in subparagraph (a).

(e) Information may not be Designated as HSBI simply because it is subject to bank secrecy or banker-client confidentiality.

[3] This category includes (but is not limited to) information on individual LCA prices, prices per seat, or information allowing the operating cost per seat of an LCA to be determined, calculated or reflected; the negotiated or offered prices for the airframe; all concessions offered or agreed to by an LCA manufacturer including financing, spare parts, maintenance, pilot training, asset value and other guarantees, buy back options, remarketing arrangements or other forms of credit support. This category shall also include the actual pricing information relating to any number of individual LCA offers and prices (including concessions) aggregated by model or other category.

BCI deleted, as indicated **[***]**

(f) In case either Party objects to the designation of information as HSBI under paragraphs 8(a)-(e), the dispute shall be resolved by the Panel. If the Panel disagrees with designation of information as HSBI, the submitting Party or Third Party may either designate it as BCI, as non-BCI/HSBI or withdraw the information. The Panel shall either destroy such information or return it to the submitting Party or Third Party. Each Party or Third Party may at any time designate as non-BCI/HSBI or as BCI information previously designated by that Party or Third Party as HSBI.

9. **"HSBI Approved Person"** means Approved Persons specifically designated by the Parties, the Panel or the Director-General of the WTO or his designee as having the right to access HSBI (according to the procedures laid down in Section IV), as well as the Panel members.

10. **"HSBI location"** means a room to be kept locked when not occupied and the access to which shall be possible only for HSBI Approved Persons, located:

(a) for the HSBI submitted by the United States, the European Communities, and any Third Parties, on the premises of the WTO (Centre William Rappard, Rue de Lausanne 154, Geneva, Switzerland);

(b) for HSBI submitted by the United States, on the premises of the United States Mission to the European Union in Brussels;

(c) for HSBI submitted by the European Communities, on the premises of the Delegation of the European Commission to the United States in Washington;

(d) for HSBI submitted by a Third Party, on the premises of its Geneva Mission to the WTO, should that Third Party so wish.

11. **"Locked CD"** means a CD-ROM that is not rewritable.

12. **"Outside Advisor"** means a legal counsel or other advisor of a Party or Third Party, who:

(a) advises a Party or Third Party in the course of the dispute;

(b) is not an employee, officer or agent of an entity or an affiliate of an entity engaged in the manufacture of LCA, the provision of supplies to an entity engaged in the manufacture of LCA, or the supply of air transportation services; and

(c) is subject to an enforceable code of professional conduct that includes an obligation to protect confidential information, or has been retained by another outside advisor who assumes responsibility for compliance with these procedures and is subject to such a code of professional conduct.

For purposes of this paragraph, outside legal counsel representing an LCA producer headquartered in the territory of one of the Parties or Third Parties in connection with these proceedings or outside consultants who have been retained by such counsel to provide advice with regard to these proceedings are not considered agents of an entity listed in subparagraph (b).

13. "**Panel**" means the DS353 Panel composed on 22 November 2006.

14. **"Party"** means the European Communities or the United States.

BCI deleted, as indicated **[***]**

14*bis*. "**Party-BCI**" means BCI originally submitted by a Party.

15. **"Representative"** means an employee of a Party or Third Party.

16. **"Sealed laptop computer"** means a laptop computer having (software and hardware) characteristics considered necessary by the submitting Party for protection of HSBI, provided that it has software installed that permits such HSBI to be searched and printed in accordance with paragraph 42. However, HSBI may not be edited on the sealed laptop computer.

17. **"Secure site"** means a facility to be kept locked when not occupied and the access to which shall be possible only for Approved Persons, located:

(a) in the case of the Panel, PGE members or experts appointed by the Panel in accordance with paragraph 1(d), and the Secretariat, on the premises of the WTO (Centre William Rappard, Rue de Lausanne 154, Geneva, Switzerland);

(b) in the case of the European Communities, the offices of External Relations Team of the Legal Service of the European Commission (Rue de la Loi 200, Brussels, Belgium), the offices of Directorate General for Trade of the European Commission (Rue de la Loi 170, Brussels, Belgium), the offices of the Permanent Delegation of the European Communities to the International Organisations in Geneva (Rue du Grand-Pré 66, 1202 Geneva, Switzerland), and three additional sites specified in accordance with subparagraph (d);

(c) in the case of the United States, the offices of the General Counsel of the Office of the United States Trade Representative (600 17th Street, NW, Washington, DC, USA), the Office of Defense Procurement and Acquisition Policy, Office of the Undersecretary of Defense for Acquisition, Technology & Logistics, the Pentagon, Arlington, VA, USA, the Mission of the United States to the World Trade Organization (11, route de Pregny, 1292 Chambésy, Switzerland), and three additional sites specified in accordance with subparagraph (d); and

(d) three sites other than a government office that are designated by each Party for use by its Outside Advisors; provided that the identity of those sites has been submitted to the other Party and the Panel, and the other Party has not objected to the designation of that site within ten days of such submission.

(e) Any objections raised under subparagraph (d) may be resolved by the Panel.

18. **"Stand-alone computer"** means a computer that is not connected to a network.

19. **"Stand-alone printer"** means a printer that is not connected to a network.

20. **"Third party"** means a Member having notified its interest in the dispute to the DSB pursuant to DSU Article 10.

21. **"Third Party BCI Approved Person"** means a representative or Outside Advisor of a third party granted access to BCI pursuant to paragraphs 25 and 32, 32bis and 37bis.

III. SCOPE

22. These procedures apply to all BCI and HSBI received by an Approved Person as a result of the Panel process and to all BCI reviewed, in accordance with these procedures, by a Third Party BCI Approved Person.

BCI deleted, as indicated **[***]**

23. Unless specifically otherwise provided herein, these procedures do not apply to a Party's or Third Party's treatment of its own BCI and HSBI.

IV. DESIGNATION OF APPROVED PERSONS

24. At the latest on 23 February 2007, each Party shall submit to the other Party and Third Parties, and to the Panel, a list of the names and titles of any Representatives and Outside Advisors who need access to BCI submitted by the other Party and/or Third Parties and whom it wishes to have designated as Approved Persons, along with any clerical or support staff that would have access to the BCI. On that list, each Party shall indicate which Approved Persons need access to HSBI submitted by the other Party and/or Third Parties and whom it wishes to have designated as HSBI Approved Persons.

25. There shall be no Third Party HSBI Approved Persons. The designation of Third Party BCI Approved Persons shall be governed by paragraph 32.

26. Each Party shall keep the number of Approved Persons as limited as possible. Each Party may designate no more than a total of 37 Representatives and 20 Outside Advisors as "HSBI Approved Persons".

27. The Panel Members, any PGE members or experts appointed by the Panel in accordance with paragraph 1(d) shall have access to BCI and HSBI. The Director-General of the WTO, or his designee, shall submit to the Parties and Third Parties, and the Panel, a list of the employees of the Secretariat who need access to BCI and/or HSBI.

28. Unless a Party objects to the designation of an Outside Advisor of the other Party or an Employee of the Secretariat, the Panel shall designate those persons as Approved Persons. A Party also may object within ten days of becoming aware of information that was not available to the Party at the time of the filing of a list under paragraphs 24 or 27 that would suggest that designation of an individual is not appropriate. If a Party objects, the Panel shall decide on the objection within ten working days.

29. An objection may be based on the failure to satisfy the definition of "Outside Advisor" or on any other compelling basis, including conflicts of interest.

30. The Parties or the Director-General of the WTO, or his designee, may submit amendments to their lists at any time, subject to the overall limits set out in paragraph 26 and to objections for the addition of new Approved Persons in accordance with paragraph 29.

V. BCI

31. Only Approved Persons and Third Party BCI Approved Persons may have access to BCI submitted in this proceeding. Third Party BCI Approved Persons may not have access to Party-BCI other than that included in the body of the submissions.[4] Approved Persons and Third Party BCI Approved Persons shall use BCI only for the purposes of this dispute. No Approved Person shall disclose BCI, or allow it to be disclosed, to any person except another Approved Person or Third Party BCI Approved Person. No Third Party BCI Approved Person shall disclose BCI, or allow it to be disclosed, to any person except another Approved Person or Third Party BCI Approved Person.

[4] "Body of the submissions" includes Appendixes and Annexes of submissions, but does not include exhibits.

BCI deleted, as indicated **[*******]**

32. Each Third Party that wants to access Party-BCI contained in the first submission of a Party shall submit to the Parties and the other Third Parties, and to the Panel, a list of the names and titles of any Representatives and Outside Advisors (including clerical or support staff) who need access to such BCI and whom it wishes to have designated as Third Party BCI Approved Persons. Each Third Party shall keep the number of Third Party BCI Approved Persons as limited as possible. Each Third Party may designate no more than a total of 5 Representatives and Outside Advisors as Third Party BCI Approved Persons.

32*bis*. Unless a Party objects to the designation of an Outside Advisor of a Third Party, the Panel shall designate those persons as Third Party Approved Persons. A Party also may object within ten days of becoming aware of information that was not available to the Party at the time of the filing of a list under paragraph 32 above that would suggest that designation of an individual is not appropriate. If a Party objects, the Panel shall decide on the objection within ten working days. An objection may be based on the failure to satisfy the definition of "Outside Advisor" or on any other compelling basis, including conflicts of interest.

33. A Party shall make no more than one copy of any BCI submitted by the other Party or a Third Party for each Secure site provided for that Party in paragraph 17.

34. Parties may incorporate BCI in internal memoranda for the exclusive use of Approved Persons. Any memorandum and the BCI it contains shall be marked in accordance with paragraph 4.

35. BCI submitted pursuant to these procedures shall not be copied, distributed, or removed from the Secure site, except as necessary for submission to the Panel.

36. The treatment in a Party's submissions to the Panel of any BCI shall be governed by the provisions of this paragraph, which shall prevail to the extent of any conflict with the other provisions of the Working Procedures (including these Procedures) relating to BCI.

(a) Parties may incorporate BCI in submissions to the Panel, marked as indicated in paragraph 4. In exceptional cases, parties may include BCI in an appendix to a submission.

(b) Unless the Panel informs the Parties otherwise, a Party submitting a submission or appendix containing BCI shall also submit, within a time period to be set by the Panel, a version redacting any BCI. This shall be referred to as the "Non-BCI Version";

(c) A Non-BCI Version shall be sufficient to permit a reasonable understanding of its substance. In order to prepare such a Non-BCI Version:

(i) A Party may request the Party that originally submitted the BCI, as soon as possible, to indicate with precision portions of documents containing BCI that may be included in the non-BCI Version and, if necessary to permit a reasonable understanding of the substance of the information, produce a Non-BCI summary in sufficient detail to achieve this aim.

(ii) Upon receipt of such a request, the Party that originally submitted the BCI shall, as soon as possible, indicate with precision portions of documents containing BCI that may be included in the Non-BCI Version and, if necessary to permit a reasonable understanding of the substance of the information, produce a Non-BCI summary in sufficient detail to achieve this aim.

(iii) The Panel shall resolve any disagreement as to whether the Party that originally submitted the BCI failed to indicate with sufficient precision portions of documents containing BCI that may be included in the Non-BCI Version and to produce, if necessary, a Non-BCI summary in sufficient detail to permit a reasonable understanding of the substance of the information, and may take appropriate action to ensure that the provisions of this paragraph are satisfied.

(d) The responding Party may designate the personal offices of up to four of its Approved Persons as additional Secure sites for the sole purpose of storing and permitting review of the BCI versions of the Parties' submissions to the Panel. All of the protections applicable to BCI under these procedures, including the storage rules in paragraph 39, shall apply to such submissions. BCI exhibits may not, however, be stored at these locations. The addresses of these locations (including room number) shall be notified to the Panel and the complaining Party.

37. Any document containing BCI shall not be copied in excess of the number of copies required by the Approved Persons. All copies of such documents shall be consecutively numbered. The making of electronic copies shall be avoided whenever possible. Such documents may be transmitted electronically only by using secure e-mail. If a Party or Third Party submits to the Panel an original document that cannot be transmitted electronically, it shall on the day of submission deliver a copy of that document to the first secure site listed for the Parties/Third Parties in paragraph 17.

37*bis*. Notwithstanding paragraph 19 of the Working Procedures,[5] the following procedures apply to the access by Third Parties to a Party's submission that contains Party-BCI.

(a) A Party's Submission containing Party-BCI shall not be serviced to Third Parties unless both Parties agree otherwise.

(b) Third Party BCI Approved Persons may view Party-BCI contained in a Party's first written submission only in a Designated Reading Room. Third Party BCI Approved Persons may not bring into that room any electronic recording or transmitting devices. Third Party BCI Approved Persons may not remove a Party's first written submission containing Party-BCI from that room, but may take handwritten notes of the Party-BCI contained therein. Such notes shall be used exclusively for this dispute (that is, DS353). Each person viewing a Party's first written submission containing Party-BCI shall complete and sign a log identifying the submission the person reviewed. The WTO Secretariat shall maintain such log until one year after the Conclusion of the Panel Process. Before entering and when leaving the room, Outside Advisors who are Third Party BCI Approved Persons may be subject to appropriate controls.

(c) If a Third Party BCI Approved Person removes from the Designated Reading Room a handwritten memo in accordance with subparagraph (b) above, that Third Party BCI Approved Person shall store the memo only in a locked security container. Such memo shall be appropriately protected against improper inspection and eavesdropping when being consulted and will be transmitted in sealed heavy duty double envelopes only. The content of such memo shall not be incorporated, electronically or in handwritten form, into the Non-BCI Version, as defined in paragraph 36(b).

[5] Concerning service of documents.

BCI deleted, as indicated **[***]**

(d) All Third Parties that have designated Third Party BCI Approved Persons must inform the Panel and both Parties, by a date set by the Panel, the identity of the specific room (including the address and the room number) in which the locked security container, as referred to in subparagraph (c) above, is located.

(e) If a Third Party BCI Approved Person removes from the Designated Reading Room a handwritten memo in accordance with subparagraph (b) above, such memo shall not be copied in excess of the number of copies required by the Third Party BCI Approved Persons. All copies of such documents shall be consecutively numbered. The making of electronic copies of such memo shall be prohibited.

(f) A Third Party may not incorporate into the body of its submission any Party-BCI . If a Third Party wishes to refer to any Party-BCI, the relevant arguments including such BCI should be incorporated into a separate Appendix. Such Appendix shall not be serviced to other Third Parties.

(g) On the date determined by the Panel as the deadline to make the Third Party submission, a Third Party shall service its submission only to the Parties and to the Panel. The submission shall be serviced to the other Third Parties only after the Parties have confirmed that the submission does not contain or disclose Party-BCI. A Party shall make this confirmation or otherwise advise of any necessary change to the relevant Third Party within 2 working days of receiving the submissions of Third Parties.

38. A Party or Third Party that wishes to submit or refer to BCI at a Panel meeting shall so inform the Panel and the other Party, and Third Parties as appropriate. The Panel shall exclude persons who are not Approved Persons or, as appropriate, Third Party BCI Approved Persons from the meeting for the duration of the submission and discussion of BCI.

39. Approved Persons shall store BCI only in locked security containers. BCI shall be appropriately protected against improper inspection and eavesdropping when being consulted and will be transmitted in sealed heavy duty double envelopes only. All work papers (*e.g.*, draft submissions, worksheets, etc.) containing BCI shall, when no longer needed, be shredded or burned consistent with normal government practice for destroying sensitive documents.

40. The Panel shall not disclose BCI in its report, but may make statements or draw conclusions that are based on the information drawn from the BCI.

VI. HSBI

41. Unless otherwise provided below, HSBI shall be subject to all the restrictions in Section V applicable to BCI.

42. HSBI shall be submitted to the WTO in electronic form, using locked CDs or two Sealed laptop computers connectable to 19" - 21" monitors. HSBI shall be stored at the HSBI location indicated in paragraph 10(a) and shall be made available for viewing and use by HSBI Approved Persons pursuant to paragraph 45 below. Each Party shall maintain an additional copy (electronic or hard) of the HSBI it submits to the WTO for access by HSBI Approved Persons acting on behalf of the other Party in the HSBI location listed in paragraph 10 located within the other Party's territory. A Stand-alone printer may be used to make hard copies of any HSBI. Such hard copies shall be made on distinctively colored paper. Such hard copies shall either be stored in a safe at the relevant HSBI location, or destroyed at the end of the relevant working session.

BCI deleted, as indicated **[***]**

43. If a Third Party submits HSBI, it shall notify the Parties of the fact that such submission has been made.

44. Except as otherwise provided in these procedures, HSBI shall not be stored, transmitted or copied either in written or electronic form.

45. HSBI Approved Persons of a Party may view HSBI on the Sealed laptop computer submitted by the other Party /a Third Party or, in the case of HSBI submitted on Locked CDs on a Stand-alone computer, only in a designated room at one of the HSBI locations indicated in paragraph 10, unless otherwise mutually agreed by the Parties. The designated room shall be available to HSBI Approved Persons from 9:00 a.m. to 5:00 p.m. during official working days at the respective HSBI location, except at the location indicated in paragraph 10(a) where the room will be available at any time, including weekends, to the Panel and the PGE members or experts appointed by the Panel in accordance with paragraph 1(d), and to HSBI Approved Persons designated by the Director-General of the WTO or his designee. HSBI Approved Persons may not bring into that room any electronic recording or transmitting devices. HSBI Approved Persons may not remove HSBI from that room, except in the form of handwritten notes or aggregated information generated on a Stand-alone computer. In either case, such notes or information shall be used exclusively for this dispute in connection with which the HSBI has been submitted. Each person viewing the HSBI in the HSBI location shall complete and sign a log identifying the HSBI that the person reviewed or, alternatively, such a log can be generated automatically. Each Party shall, for the HSBI location within its territory referenced in paragraph 10, maintain such log until one year after the Conclusion of the Panel Process. Before entering and when leaving the room, Outside Advisors who are HSBI Approved Persons may be subject to appropriate controls. Viewing of HSBI at the location indicated in paragraph 10(a) by HSBI Approved Persons designated by the Parties shall be conducted under the observation of a WTO security guard or employee.

46. No Approved Person shall disclose HSBI to any person except another HSBI Approved Person, and then only for the purpose of this dispute.

47. HSBI may be processed only on Stand-alone computers. Any memorandum containing HSBI shall not be transmitted electronically, whether by e-mail, facsimile, or otherwise.

48. A Party or Third Party that wishes to submit or refer to HSBI at a Panel meeting shall so inform the Panel and the other Party, and Third Parties as appropriate. The Panel shall exclude persons who are not HSBI Approved Persons from the meeting for the duration of the submission and discussion of HSBI.

49. All HSBI shall be stored in a safe at the relevant HSBI location.

50. The treatment in a Party's submissions to the Panel of any HSBI shall be governed by the provisions of this paragraph, which shall prevail to the extent of any conflict with the other provisions of the Working Procedures (including these Procedures) relating to HSBI.

(a) HSBI may be incorporated into a separate appendix to, but not the body of, a Party's submission, which shall be referred to as the "Full HSBI Version Appendix" of the appendix;

(b) A Party submitting an appendix containing HSBI shall also submit, within a time period to be set by the Panel, a version redacting any HSBI. This shall be referred to as the "Redacted Version Appendix";

(c) At the request of a Party, information contained in the Redacted Version Appendix may be treated as BCI, in accordance with the provisions of Section V;

BCI deleted, as indicated **[***]**

(d) A Redacted Version Appendix shall be sufficient to permit a reasonable understanding of its substance. In order to prepare such a Redacted Version Appendix:

(i) A Party may request that the Party that originally submitted the HSBI, as soon as possible, indicate with precision portions of documents containing HSBI that may be included in the Redacted Version Appendix and, if necessary to permit a reasonable understanding of the substance of the information, produce a non-HSBI summary in sufficient detail to achieve this aim.

(ii) Upon receipt of such a request, the Party that originally submitted the HSBI shall, as soon as possible, indicate with precision portions of documents containing HSBI that may be included in the Redacted Version Appendix and, if necessary to permit a reasonable understanding of the substance of the information, produce a non-HSBI summary in sufficient detail to achieve this aim.

(iii) The Panel shall resolve any disagreement as to whether the Party that originally submitted the HSBI failed to indicate with sufficient precision portions of documents containing HSBI that may be included in the Redacted Version Appendix and to produce, if necessary, a non-HSBI summary in sufficient detail to permit a reasonable understanding of the substance of the information, and may take appropriate action to ensure that the provisions of this paragraph are satisfied.

(e) The Full HSBI Version Appendix shall be kept in an HSBI Location in the form of a locked CD. If that is not practical, the Party may keep it in a locked security container in a Secure Site in the form of a locked CD.

(f) The locked CD containing the Full HSBI Version Appendix shall bear the label marked 'FULL VERSION OF HSBI APPENDIX TO SUBMISSION' and indicate the name of the Party that submitted the HSBI. In addition, the HSBI Appendix itself shall be marked with heading with double bolded square brackets on each page in an electronic file that contains the notation 'FULL VERSION OF HSBI APPENDIX TO SUBMISSION'. The electronic file containing the HSBI Appendix shall have a file name that contains the letters "HSBI VERSION".

(g) The Party shall submit one copy of the Full HSBI Version Appendix to the Panel (c/o the DS Registry), and two copies to the other Party in the form of locked CDs. The Full HSBI Version Appendix shall not be transmitted via e-mail. Parties shall agree between themselves beforehand on the name of the Approved Person that is to receive the locked CD.

(h) The Party shall commence transfer of the locked CDs containing the Full HSBI Version Appendix no later than the deadline for the submission concerned, and, at the same time, provide the Panel and the other Party with proof that this has been done.

(i) No more than one working day in advance of a Panel meeting with the parties, a Party may, exclusively at that Party's Permanent Mission in Geneva, use the locked CD to produce no more than one hard copy of the Full HSBI Version Appendix for each HSBI Approved Person planning to attend that Panel meeting.

(j) Panelists and the PGE members or experts appointed by the Panel in accordance with paragraph 1(d) and HSBI Approved Persons designated by the Director-General of the WTO or his designee may, exclusively on the WTO premises, produce paper

versions of the Full HSBI Version Appendix for the purpose of, and immediately prior to, a Panel meeting with the parties and/or an internal meeting.

(k) Any hard copy of a Full HSBI Version shall be destroyed immediately upon the conclusion of a Panel meeting with the parties and/or an internal meeting.

(l) The Panel reserves the right, after consulting the parties, to amend the provisions of this paragraph at any time in order to accommodate situations arising during Panel meetings, and the preparation of the interim report and the final report.

51. The Panel shall not disclose HSBI in its report, but may make statements or draw conclusions that are based on the information drawn from the HSBI.

VII. RESPONSIBILITY FOR COMPLIANCE

52. Each Party and Third Party is responsible for ensuring that its Approved Persons and Third Party BCI Approved Persons comply with these procedures to protect and to return or destroy BCI and HSBI submitted by each Party and Third Party, as well as with enforceable codes of professional conduct to which its approved persons or other outside advisors are subject. The Secretariat is responsible for ensuring that its employees comply with these procedures to protect BCI and HSBI submitted by a Party or Third Party and for adhering to the requirements to provide access in the WTO to Approved Persons and to control the use by HSBI Approved Persons when reviewing the material in the WTO premises. The Panel shall comply with these procedures to protect BCI and HSBI submitted by a Party or Third Party.

VIII. ADDITIONAL PROCEDURES

53. After consulting with the Parties, the Panel may apply any other additional procedures that it considers necessary to provide additional protections to the confidentiality of BCI or HSBI or other types of information not explicitly covered by these Procedures but which the Panel considers may be of assistance in adjudicating the claims before it, including, if necessary, information that the United States internally classifies as "Top Secret", "Secret", or "Confidential".

54. The Panel may, with the consent of both Parties, waive any part of these procedures. Such "waiver" shall be specifically set forth in writing and signed by a representative of both Parties.

IX. RETURN AND DESTRUCTION

55. Before the Conclusion of the Panel Process as defined in paragraphs 3(a), 3(c) or 3(d), the Panel shall fix a period within which, the Panel, any PGE members or experts appointed by the Panel, the Secretariat, the Parties and Third Parties (along with all Approved Persons) shall destroy or return all documents (including electronic material) or other recordings containing BCI to the Party or Third Party that submitted such documents or other recordings. At the same time, the Panel shall fix a period within which the Panel, Secretariat and Parties shall destroy and/or return any electronic material submitted by a Party or Third Party that contains HSBI to the Party or Third Party that submitted it.

56. After the Conclusion of the Panel Process as defined in paragraph 3(b), the Panel will inform the Appellate Body of these procedures and will transmit to the Appellate Body any BCI/HSBI governed by these Procedures. Such transmission shall occur separately from the rest of the Panel record, to the extent possible.

BCI deleted, as indicated **[*******]**

57. The hard drive of all Stand-alone computers and all media used to back up such computers shall be destroyed at the Conclusion of the Panel Process as defined in paragraphs 3(a), 3(c) or 3(d).

BCI deleted, as indicated **[***]**

ANNEX E

SELECTED RULINGS OF THE PANEL CONCERNING BCI/HSBI PROCEDURES AND THEIR APPLICATION

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BCI deleted, as indicated **[***]**

ANNEX E-1

COMMUNICATION OF 4 JUNE 2007

United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) (DS353)

1. The Panel has carefully considered the letter from the European Communities ("EC") dated 23 April 2007, responding to the comments of the United States ("US") concerning designation of certain BCI and HSBI. In support of its approach to the designation of information as HSBI, the EC draws a distinction between (a) information sought to be protected, and (b) documents that reveal such information. According to the EC, the BCI/HSBI Procedures are concerned with the former, and support for this proposition can be found in paragraph 8 of the BCI/HSBI Procedures which refers to "information ... regardless of whether contained in a document...". The EC contends therefore that "publicly available documents may be classified as HSBI if their disclosure (particularly in light of the context in which they are disclosed) would reveal business information not in the public domain that, in the view of the Party submitting the information, could cause exceptional harm to its originators."[1] From this, the Panel understands the EC to be arguing that the "information" which may be protected as BCI or HSBI under the BCI/HSBI Procedures extends beyond information imparted directly in the content of a particular text or speech and comprehends more indirectly the use made of a particular document or utterance, or the context in which a particular document or utterance is obtained, communicated, made or reproduced.

2. Paragraph 2 of the BCI/HSBI Procedures defines BCI as "any business information that a Party or Third Party has 'Designated as BCI' regardless of whether contained in a document provided by a public or private body *because it is not otherwise available in the public domain"*. Paragraph 8 of the BCI/HSBI Procedures, defines HSBI as "any business information regardless of whether contained in a document provided by a public or private body that a Party or Third Party has 'Designated as HSBI' *because it is not otherwise available in the public domain* and its disclosure could, in the Party's or Third Party's view, cause exceptional harm to its originators." It is clear that a common feature of both BCI and HSBI is that the information so designated is not otherwise in the public domain. The EC interprets the concept of "information" which may be designated as BCI and HSBI under the BCI/HSBI Procedures in a broad manner. Such interpretation leads to the result that, notwithstanding the clear requirement in both paragraphs 2 and 8 that information in the public domain cannot be designated as BCI or HSBI, it would nonetheless be possible to designate information which is in the public domain as BCI or HSBI where one can derive from that information other "information" (in a more abstract sense) which is distinct from the information that is in the public domain. We do not consider this to be a reasonable interpretation of the BCI/HSBI Procedures. The Panel considers that the "information" with which the BCI/HSBI Procedures is concerned is information which is explicitly communicated in a document,[2] as opposed to "information" concerning the use being made of a particular document[3] in the context of the present dispute, or "information" as to how a particular document[4] came into the possession or knowledge of one of the Parties. The Panel considers that this is evident from a reading of paragraphs 2 and 8 of the BCI/Procedures in conjunction with terms "Designated as BCI" and "Designated as HSBI" in

[1] EC Letter dated 23 April 2007, p. 3.
[2] Or electronic file or oral statement.
[3] Or electronic file or oral statement.
[4] Or electronic file or oral statement.

paragraphs 4 and 5, respectively, of the BCI/HSBI Procedures. Paragraphs 4 and 5 refer to the means of designating information as BCI and HSBI, respectively. These paragraphs refer to "information" that is in printed form, electronic form or spoken form and clearly show that the BCI/HSBI Procedures were intended to apply to specific sensitive information appearing *within* a document or electronic file, or revealed in the course of speech.

1. The fact that a document is being used by the EC in the context of this dispute

3. In relation to the specific issues for determination by the Panel, the Panel notes that the EC argues as follows (italics in original, underlining added):

> "In particular, the *information* being protected through the HSBI designation is *the identity of the airlines involved in the sales campaigns selected by the European Communities* as evidencing lost sales, displacement and impedance, and price suppression within the meaning of Article 6.3 of the *SCM Agreement*. While it is true that publicly available documents provide certain information regarding these campaigns, the fact that campaigns involving these airlines are being used by the European Communities to demonstrate lost sales, displacement and impedance, and price suppression is not information in the public domain. It is therefore necessary to classify even publicly available documents related to these sales campaigns as HSBI in order to protect the fact that they are being used by the European Communities in the context of this dispute."[5]

4. It follows from the view we have expressed in paragraph 2 that the Panel does not agree with the EC that "the fact that {a document is} being used by the European Communities in the context of this dispute" in and of itself is the *information* which the BCI/HSBI intends to protect – be it as BCI or HSBI. It is obvious that the fact the EC is using a particular document in this dispute is not "information in the public domain". In fact, unless a party elects to publicly disclose the fact that it is using certain documents as evidence in support of its claims in a dispute, it is *always* the case that the identity of the documents being used by a party in an ongoing dispute is confidential – that is, information not in the public domain.[6] If the EC's argument were correct, it would result in a party being free to designate *any* document in this dispute as BCI or HSBI unless it voluntarily elects to disclose the fact that it is using a specific document in this dispute. Moreover, to accept the EC's arguments on this issue would be tantamount to classifying a core part of its case as HSBI. We do not consider that the BCI/HSBI Procedures were intended to lead to such a result.

2. Documents obtained on an informal and confidential basis

5. The EC has also sought to (i) designate as HSBI various presentations made by *Boeing* executives to particular airline clients in the context of sales campaigns, which have been shared with Airbus by those airlines on condition of anonymity; and (ii) designate as BCI presentations made by *Boeing* at airline conferences which have been shared with Airbus by conference organizers on condition of anonymity. According to the EC, "the *information* that the European Communities is trying to protect, by classifying these documents as BCI and HSBI is that Airbus is in possession of these documents and that certain airline executives or conference organisers have provided these documents to Airbus."

6. In relation to the information it has sought to designate as HSBI, the EC argues that such information constitutes "information gathered or produced in the context of LCA sales campaigns" within the meaning of subparagraph 8(a)(ii) of the BCI/HSBI Procedures. In addition, the EC argues that failure to designate these documents as HSBI in their entirety (including the titles of the

[5] EC Letter of 23 April 2007, p. 4.
[6] DSU Article 14.1

BCI deleted, as indicated **[***]**

documents) could cause exceptional harm to Airbus and to the airlines and airline executives that provided the documents to Airbus if Boeing were to learn that these documents had been provided to Airbus by the airlines concerned.

7. In relation to the Boeing presentations at airline conferences, which the EC has designated as BCI, the EC contends that if these documents were not classified as BCI in their entirety, the identity of the conference organizers who provided these documents to Airbus would be readily apparent and this disclosure would cause harm to Airbus as well as to the conference organizers in question.

8. The Panel understands that the EC is in effect arguing that the fact of *how* it obtained the document/information is the "information" it seeks to protect under the BCI/HSBI Procedures. It follows from the views we have expressed in paragraph 2 that the Panel rejects this argument. As the Panel stated in its communication of 16 April 2007:

> "The Panel considers that the standard for determining whether {information contained in Boeing documents} is BCI or HSBI relates to the possibility of harm to the "originator" of the information, which in this case is Boeing, in the event of disclosure. In our view, the originator of a document is entitled, through appropriate channels, to waive BCI or HSBI status where it believes that disclosure of the information would not cause the requisite harm, or where it is prepared to accept such harm. The Panel has, at the very least, strong doubts about how it could be that it would be consistent with fundamental fairness for it to rely on documents originated by a private party where that private party was unaware that those documents were even before the Panel (let alone their content) because they were designated as BCI or HSBI by the other party."

3. Exhibit EC-15

9. The EC has sought to defend its designation of exhibit EC-15 as BCI in its entirety on a somewhat different basis. Exhibit EC-15 comprises an analysis, conducted by Airbus aeronautical engineers, of alleged links between various NASA research and development programs and specific Boeing civil aircraft programs. Concerning exhibit EC-15, the EC states as follows (underlining added):

> "Second, disclosure of any portion of exhibit EC-15, including its conclusions, would cause harm to Airbus. As this is a study conducted by Airbus' engineering department, <u>it provides valuable insights into the extent of Airbus' aeronautical engineering expertise, for it is that very expertise that provides the basis for the study's conclusions.</u> Indeed, a Boeing engineer examining this study would be able to ascertain from it how far advanced Airbus' knowledge is with respect to the wide variety of aeronautics technologies covered by the study."[7]

10. The Panel notes that the conclusions of any expert analysis are necessarily based, at least in part, on the subjective knowledge of the expert, and that such conclusions are therefore inherently revelatory of that expert's subjective state of knowledge. However, it is clear from the approach outlined by the Panel in paragraph 2 that it is incumbent on the EC to specifically identify the Airbus aeronautical engineering expertise, or other Airbus technological information or know-how that is explicit in the document itself.

[7] EC Letter of 23 April 2007, p. 8.

BCI deleted, as indicated **[***]**

4. Concluding remarks

11. The Panel clarifies that the views we have expressed above do *not* mean that the documents the EC is seeking to protect can be made public by the US. As the parties are well aware, panel deliberations are confidential.

12. In the light of the above, the Panel directs the EC to submit, **by Monday 11 June**, properly bracketed versions of all the paragraphs and exhibits raised by the US – including paragraphs 717 and 1361 of the EC submission, which the US identified in footnote 3 of its 10 April letter. In so doing, the EC is directed to perform the re-bracketing in accordance with the Panel's understanding of the HSBI/BCI Procedures as outlined above, as well as indicated in our communication dated 16 April.

13. Other than paragraphs 717 and 1361, the EC need not resubmit the body (i.e. the 678 page-document) of the submission at this time. The Panel has noted that the EC stated as follows in its letter:

> "The European Communities is willing to re-designate the name and number of exhibit EC-15 as non-BCI in the citations throughout its first written submission."[8]

The Panel will inform the EC in due course when it must submit a revised version of the body of the submission.

14. Unless the EC makes changes to the text of the specific exhibit/paragraph, the Panel requests the EC to submit the re-bracketed exhibits and paragraphs (i.e. Annexes) in a BCI version.[9]

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[8] Page 8 of the 23 April EC letter.

[9] That is, the Panel does not, for example, expect the EC to upload the re-bracketed exhibits onto the HSBI laptop. Needless to say, the EC is allowed to redact all information which it deems as HSBI from the BCI version.

BCI deleted, as indicated **[***]**

ANNEX E-2

COMMUNICATION OF 9 JULY 2007

United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) (DS353)

The Panel confirms receipt of the letter and the documents submitted by the European Communities ("EC") on 18 June, which were submitted in response to the Panel's ruing dated 4 June on the issue of bracketing of certain information. The Panel has also noted the comments of the United States on this issue in its cover letter of the submission made on 6 July. As the parties will recall, this issue was triggered by the comments of the United States ("US"), dated 10 April, on the non-BCI version and on the Redacted Version Appendix submitted by the EC on 3 April.

The Panel hereby suggests that the revised version submitted by the EC on 18 June be deemed as the basis of the non-BCI version to be serviced to the Third Parties. The Panel requests the EC to service the non-BCI version (i.e. with information between brackets being deleted) by close of business on **10 July**.

In addition, in accordance with paragraph 32 of the BCI/HSBI Procedures[1], the Panel proposes that the attached procedures be followed in order for Third Parties to access BCI in the parties' submission. The Panel requests that the parties submit comments, if any, on the attached draft procedures by close of business **11 July**. The Panel understands that once the parties agree on the procedures, the revised BCI version of the body of the submission and the revised Redacted Version Appendix submitted from the EC on 18 June is the document that the Third Parties will be granted access at this point of time. The Panel understands that Third Parties will not be granted access to the "BCI exhibits".

[1] "Additional Working Procedures For DS353 – Procedures for the Protection of Business Confidential Information and Highly Sensitive Business Information".

BCI deleted, as indicated **[***]**

ANNEX E-3

COMMUNICATION OF 16 JULY 2007

United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint) (DS353)

The Panel informs the Parties and Third Parties that it has amended, after consulting the parties, the BCI/HSBI Procedures[1] as attached in accordance with the original paragraph 32[2] of the BCI/HSBI Procedures.[3]

In accordance with paragraph 32 and paragraph 37*bis*(d) of the amended BCI/HSBI Procedures, the Panel invites Third Parties to submit, if they so wish, the following information to the Panel as well as to the Parties and other Third Parties by close of business of **18 July 2007**.

- A list of the names and titles (including affiliation) of any Representatives and Outside Advisors (including clerical or support staff) who need access to Party-BCI and whom it wishes to have designated as Third Party BCI Approved Persons. (Please note that no more than 5 persons can be designated.)

- The identity of the "specific room" (including the address and the room number) in which the locked "security container", as referred to in paragraph 37*bis*(c) of the amended BCI/HSBI Procedures, is located. (Please note that only one "specific room" can be designated.)

Once the above information is submitted from Third Parties, the Panel invites the Parties to submit any objections based on paragraph 32*bis* of the amended BCI/HSBI Procedures by close of business of **20 July 2007**.

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[1] *"Additional Working Procedures For DS353 – Procedures for the Protection of Business Confidential Information and Highly Sensitive Business Information"*.

[2] This paragraph has been amended in the attached latest version. See Panel's communication dated 19 February 2007 for the original wording of this paragraph.

[3] Changes are highlighted in the attachment for ease of reference.