

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft
(Second Complaint):
Recourse to Article 21.5 of the DSU by the European Union*

(DS353)

NON-BCI VERSION OF THE
FIRST WRITTEN SUBMISSION OF THE UNITED STATES

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TABLE OF CONTENTS

Table of Reports.....	xvii
Table of Abbreviations and Acronyms.....	xxi
Introduction.....	1
I. Procedural History	4
A. Recommendations and Rulings of the DSB.....	4
B. U.S. Measures Taken to Comply	6
C. Compliance Proceedings and Gathering of Information	8
II. Review under Article 21.5 of Measures Taken to Comply	12
A. An Article 21.5 Proceeding concerns the Existence of the Responding Member’s Measures Taken to Comply and Their Consistency with the Covered Agreements, and the Reargument of Issues Settled in the Original Proceedings	12
B. The Recommendations and Rulings of the DSB, as Set Out in the Original Panel and Appellate Body Reports, Provide the Starting Point for a Panel’s Consideration of a Claim under Article 21.5 of the DSU.....	14
C. The Parties to a Compliance Proceeding Bear the Same Burden of Proof as in an Original Proceeding.	16
1. The burden of proof in a compliance proceeding involving Article 7.8 of the SCM Agreement.....	16
2. There is no justification to lower the EU’s burden of proof by accepting the demonstrably incorrect information it advances as “the best available evidence.”	18
III. Alleged Subsidies.....	20
A. Analytical Framework	20
1. The analysis of subsidy allegations begins with an evaluation of whether the measure, properly characterized, confers a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement.....	20
2. A benefit exists only if the government provides the financial contribution on terms better than the recipient could obtain in a market transaction.	21

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

B.	The United States Renews and Augments its Request for Preliminary Rulings that a Number of Claims Raised by the EU are Not Properly within the Terms of Reference of this Panel.....	24
1.	DoD agreements under “new” program elements	25
2.	DoD procurement contracts under “old” program elements.....	26
3.	Boeing’s access to DoD equipment and employees.	27
4.	South Carolina Measures	28
5.	FAA CLEEN.....	28
6.	Washington State JCATI and Leasehold Excise Tax Credit	29
7.	Washington State measures for which there was no DSB-adopted finding.....	29
8.	Washington State measures under Article 3.1(a) and 3.2 of the SCM Agreement	30
9.	Prohibited subsidy claims against measures that were cited in the EU’s original panel request.....	30
10.	The EU’s claims regarding Article III:4 of GATT 1994 are outside the Panel’s terms of reference.....	31
11.	Article 4 of the SCM Agreement	32
12.	Article 6.2 of the DSU and the EU prohibited subsidy claims	32
12.	Conclusion	33
C.	Payments and Access to Facilities, Equipment, and Employees under NASA Contracts and Space Act Agreements.....	33
1.	NASA has complied with the recommendations and rulings of the DSB by modifying its research contracting practices in general, and by amending the terms of its contracts with Boeing.	36
2.	Payments and access to facilities, equipment, and employees at issue.....	41
a.	Fundamental Aeronautics Program (payments of \$[BCI])	43
b.	Aviation Safety Program (payments of \$[BCI])	53
c.	Aeronautics Test Program (payments of \$[BCI])	59
d.	Integrated Systems Research Program (payments of \$[BCI])	61
e.	Aeronautics Strategy and Management Program (no payments).....	66
f.	Strategic Capabilities Assets Program (no payments for research).....	66

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

g.	High-end Computing Program (no payments).....	67
h.	Cross-Agency Support Programs.....	67
i.	Facilities, equipment, and employees provided through NASA contracts and SAAs are much less valuable than alleged by the EU.	67
j.	The EU’s methodology for valuing the subsidy to Boeing grossly overstates the amount of any financial contribution.	69
k.	The EU gets critical facts wrong in its discussion of intellectual property rights arising as a result of work under NASA contracts and SAAs.....	70
3.	In light of changes to NASA practices, post-2006 NASA contracts should be treated as purchases of services and post-2006 SAAs as joint ventures.....	72
a.	Post-2006 SAAs and cooperative agreements should be treated as joint ventures for purposes of the financial contribution analysis.	74
b.	Post-2006 NASA contracts are purchases of services.....	76
4.	Purchases of services and the alleged provision of intellectual property rights are not financial contributions.....	81
a.	A purchase of services is not a financial contribution.	81
b.	Intellectual property rights accruing to Boeing by reason of activities conducted under contracts, cooperative agreements, and SAAs are not financial contributions.....	82
5.	None of the alleged financial contributions confers a benefit.	83
a.	As modified, the pre-2007 NASA contracts do not confer a benefit when compared with commercial joint ventures	85
b.	Post-2006 NASA contracts do not confer a benefit, as the remuneration to Boeing is not more than adequate.	87
c.	SAAs do not confer a benefit when compared with commercial joint ventures.....	88
6.	The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.	89
D.	The Only DoD Subsidies Found to Exist: Payments and Access to Facilities under Agreements Funded through the Original 23 Program Elements.....	91

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

1.	DoD has reduced the number and value of agreements with Boeing under the original 23 program elements, and modified their terms so as to eliminate the benefit.....	93
2.	The payments and access to facilities at issue	93
3.	As modified, DoD payments and access to facilities under agreements challenged by the EU do not confer a benefit when compared with commercial joint ventures.....	95
4.	The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.	97
5.	The EU’s methodology for valuing the alleged financial contribution provided by DoD RDT&E is invalid.....	98
E.	Measures Found Not to be Subsidies in the Original Proceeding: Payments and Access to Facilities under Procurement Contracts Funded through the Original 23 Program Elements	101
1.	These contracts were not covered by the recommendations and rulings of the DSB, and are not closely related to the measures found to be WTO-inconsistent, so DoD properly took no measures to comply with respect to these contracts.	103
2.	The EU recognizes that science and technology contracts (which the EU calls “general RDT&E”) are different from systems acquisition contracts (which the EU calls “military aircraft RDT&E”), but fails to reflect that difference properly in the analysis.....	103
3.	The EU has failed to establish that DoD research contracts funded through the “general research” program elements are a financial contribution that confers a benefit.	107
a.	DoD S&T contracts are driven by military needs and objectives, and have a value much less than alleged by the EU	107
i.	Defense Research Sciences (PE 0601102F)	107
ii.	Materials (PE 0602102F)	109
iii.	Aerospace Flight Dynamics/Aerospace Vehicle Technologies (PE0602201F)	109
iv.	Aerospace Propulsion (PE 0602203F)	112
v.	Aerospace Avionics/Aerospace Sensors (PE 0602204F)	114
vi.	Dual Use Science and Technology (PE 0602805F)	

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

vii.	Advanced Materials for Weapons Systems (PE0603112F)	114
viii.	Flight Vehicle Technology (0603205F)	115
ix.	Aerospace Structures/Aerospace Technology Dev/Demo (PE 0603211F)	115
x.	Aerospace Propulsion and Power Technology (PE 0603216F)	116
xi.	Flight Vehicle Technology Integration (PE 0603245F)	117
xii.	RDT&E for Aging Aircraft (PE 0605011F)	117
xiii.	Manufacturing Technology/Industrial Preparedness (“ManTech”) (various)	118
b.	The patents identified by the EU only serve to underscore the rarity with which DoD-funded RDT&E produces patentable inventions with applicability in the large civil aircraft sector.	118
c.	The EU has failed to demonstrate that DoD contracts funded by the “general research” program elements are joint ventures.	121
i.	General observations regarding the EU’s argument	121
ii.	DoD contracts funded through the “general research” program elements are not “akin to a species of joint venture.”	123
iii.	DoD contracts funded through the original “general research” program elements are purchases of services.	126
d.	DoD contracts funded through the “general research” program elements do not confer a benefit.	127
e.	The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.	128
4.	The EU has not demonstrated that contracts funded through the “military aircraft” program elements are subsidies or are specific.	129
a.	DoD program of record contracts are designed to purchase or improve weapon systems for DoD, and are driven by military needs and objectives.	130
i.	V-22/CV-22 “Osprey” (PE 0604262N/0401318F)	130
ii.	F/A-18 Squadrons (PE 0204136N)	131

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

iii.	Joint Strike Fighter	132
iv.	C-17 (PE 0401130F/0604231F)	132
v.	Other military aircraft RDT&E PEs	133
b.	The EU’s assertions regarding patents are also incorrect insofar as they relate to contracts under the “military assistance” program elements.....	134
c.	The EU has failed to demonstrate that DoD program of record contracts are joint ventures, when they are actually purchases of goods or product upgrades not covered by the EU claims.....	134
i.	General observations regarding the EU’s argument	134
ii.	DoD contracts funded through the “military aircraft” program elements are not “akin to a species of joint venture.”	134
iii.	DoD program of record contracts funded through the original “military aircraft” program elements are purchases of either goods or services, depending on the nature of the contract.	137
d.	DoD systems acquisition contracts do not confer a benefit when compared with commercial purchases of goods or product upgrades.....	138
e.	The benefit alleged by the EU is not specific.....	139
F.	Measures that the EU Could have Challenged in the Original Proceeding, but did Not: the New Program Elements.....	139
1.	Contracts under “new” program elements are not properly within the terms of reference of this compliance panel.....	141
2.	The EU has not demonstrated that contracts and agreements funded through the new “general research” program elements are specific subsidies.....	142
a.	The DoD contracts and agreements funded through the new “general research” program elements are driven by military needs and objectives.....	142
i.	Materials and Biological Technology (PE 0602715E)	142
ii.	Sustainment Science & Technology (PE0603199F)	143
iii.	Technology Transfer (PE 0604317F)	143

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

iv.	Aviation Safety Technologies (0606301D8Z)	
	143	
v.	DLA ManTech (0708011S)	144
b.	The EU has failed to demonstrate that DoD contracts funded through the new “general research” program elements are joint ventures, when they are actually purchases of services.....	144
c.	DoD contracts and agreements funded through the new “general research” program elements do not confer a benefit when compared with commercial purchases of services.....	144
d.	The benefit alleged by the EU is not specific.	145
3.	The EU has not demonstrated that the contracts and agreements funded through the “military aircraft” program elements are specific subsidies.	145
a.	The contracts and agreement funded through the new “military aircraft” program elements challenged by the EU are driven by military needs and objectives.....	145
i.	Airborne Warning and Control System (“AWACS”) (PE 0207417F)	145
ii.	KC-46 (0605221F)	146
iii.	P-8A (0605500N)	148
iv.	Long-Range Strike Bomber (0604015F)	151
b.	The EU has failed to demonstrate that contracts funded through the “military aircraft” program elements are joint ventures, when they are actually purchases of goods not covered by the EU claims or purchases of services that are not a financial contribution.	152
c.	DoD procurement contracts funded through the “military aircraft” program elements do not confer a benefit when compared with commercial purchases of goods or product upgrades.	152
d.	The benefit alleged by the EU is not specific.	152
G.	FAA Continuous Lower Energy, Emissions, and Noise (CLEEN) Program	153
1.	The CLEEN program is not within the terms of reference of this compliance proceeding.	153
2.	The CLEEN program is not a specific subsidy to Boeing.....	155

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

a.	The EU overstates any financial contribution provided by the CLEEN program.	155
b.	The CLEEN program does not provide a benefit to Boeing.....	156
c.	CLEEN is not a specific subsidy.	157
H.	FSC/ETI.....	157
I.	Washington Measures.....	159
1.	Washington State B&O Tax Rate.....	159
2.	The EU’s claims against measures that were not found to cause adverse effects are not within the terms of reference of this compliance proceeding.	160
a.	Washington State B&O tax credit for preproduction development.....	161
b.	Washington State B&O Tax Credit for Property Taxes	162
c.	Sales and use tax exemptions for computer hardware, software and peripherals	162
d.	City of Everett B&O tax rate	162
3.	The measures not challenged in the original proceeding are not within the terms of reference of this compliance proceeding.	163
a.	Washington State B&O Tax Credit for Leasehold Excise Taxes.....	164
b.	Washington State Joint Center for Aerospace Technology Innovation	164
i.	The JCATI is not a measure taken to comply with the DSB’s recommendations and rulings.	164
ii.	The JCATI activities are not a specific subsidy to Boeing.	166
J.	Kansas IRBs.....	167
K.	South Carolina Measures	168
1.	Introduction.....	168
2.	Factual Background	168
a.	The BMW Paradigm.....	170
b.	Project Emerald.....	171
c.	Project Gemini	172
3.	The EU fails to establish that Project Emerald is within the scope of this compliance proceeding and constitutes a subsidy to Boeing under Article 1 of the SCM Agreement.....	172

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

- a. The EU fails to establish that Project Emerald is within the terms of reference of this dispute..... 173
 - i. Project Emerald is not a measure taken to comply because it pre-dates the original panel proceeding. 173
 - ii. The EU has failed to establish that Project Emerald has a close nexus with the recommendations and rulings of the DSB. 173

- b. The EU fails to establish that Project Emerald confers a subsidy to Boeing..... 175
 - i. The EU has not demonstrated that any alleged benefits to Vought and/or GA passed through to Boeing – and in fact, the evidence confirms that they have not. 175
 - (a) Boeing’s acquisitions were for fair market value. 176
 - (b) Boeing’s acquisitions were at arm’s length. 176
 - (c) Boeing’s acquisitions resulted in the complete transfer of ownership and control over both Vought South Carolina and GA, with no ongoing controlling interest by either of the respective sellers. 176

- c. The EU fails to establish that any of the elements of Project Emerald confers a benefit to Boeing..... 177
 - i. Project Site Lease 177
 - ii. Project Emerald Fee Agreement 178
 - (a) Background on FILOT Agreements 178
 - (b) The Project Emerald Fee Agreement does not confer a financial contribution. 179
 - iii. Provision of facilities and infrastructure through state-funded bonds 181
 - iv. MCIP Jobs Tax Credits 182

- 4. The EU has failed to establish that Project Gemini is within the terms of reference of the Panel or confers a subsidy to Boeing within the meaning of Article 1 of the SCM Agreement..... 183

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

a.	The EU fails to establish that Project Gemini is within the terms of reference of this dispute.....	183
b.	The EU fails to establish that Project Gemini confers a benefit to Boeing.....	185
i.	Project Site Lease	185
ii.	Project Gemini Fee Agreement	185
iii.	Provision of facilities and infrastructure through state-funded bonds	186
iv.	Sales & Use Tax Exemptions	186
(a)	The sales and use tax exemptions do not confer a financial contribution.....	187
(b)	The EU overstates the value of the sales and use exemptions for aircraft fuel, computer equipment, and construction materials.....	188
v.	Income Allocation & Apportionment Agreement	191
(a)	Background on South Carolina Corporate Income Tax	191
(b)	The Boeing Apportionment Agreement.....	192
(c)	The EU fails to establish that the apportionment agreement confers a financial contribution.....	193
vi.	MCIP Jobs Tax Credits	193
vii.	LCF Property Tax Exemption	194
(a)	The LCF property tax exemption does not confer a financial contribution.....	194
(b)	The EU overstates the value of the LCF property tax exemption.....	195
viii.	readySC™ Workforce Training	196
5.	The EU fails to establish that Project Emerald, Project Gemini, and their individual elements are specific to Boeing.....	198
a.	The provision of state bond-funded facilities and infrastructure is not specific.....	198
i.	Background on South Carolina state bond funding for industrial projects	198
ii.	The system of legislation for issuing state bonds to provide facilities & infrastructure is not explicitly	

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

	limited to certain enterprises within the meaning of Article 2.1(a).	200
iii.	The system of legislation for issuing state bonds to provide facilities and infrastructure is not “in fact specific” within the meaning of Article 2.1(c).	201
b.	FILOT Agreements	202
c.	Project Site Lease	203
d.	MCIP jobs tax credits	203
e.	Income Allocation and Apportionment Agreement	205
f.	readySC™ job training	206
g.	<i>LCF property tax exemption</i>	207
h.	Sales & use tax exemptions	208
L.	Prohibited Subsidy Claims	211
1.	The EU’s prohibited export-contingent and import-substitution subsidy claims are precluded and not properly within the Panel’s terms of reference.	212
a.	The EU is precluded from re-litigating claims it lost.	212
b.	The EU is precluded from raising new claims in this compliance proceeding that it could have raised in the original proceeding, but did not.	213
2.	The EU’s contingent-in-fact prohibited subsidy claims	214
a.	The EU’s export contingency claims fail.	214
b.	The EU’s import substitution claims fail.	215
3.	EU’s claim regarding IAAA	215
4.	EU’s claim regarding FSC	215
IV.	The United States Took Appropriate Steps to Remove the Adverse Effects of Any Unwithdrawn Subsidies.	216
A.	Introduction	216
B.	Legal Framework Governing Adverse Effects Assessment in a Compliance Proceeding	218
1.	Relevant Provisions of the SCM Agreement and DSU	218
2.	Standards for Assessing Causation	219
3.	Product Markets	220

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

C.	The EU Advances Numerous Claims and Arguments that Cannot Properly Be Considered in this Compliance Proceeding.....	222
D.	Causal Mechanisms Alleged by the EU.....	224
1.	The Alleged Subsidies are not Causing Present Adverse Effects through a Technology Effects Causal Mechanism.	224
2.	The Alleged Subsidies are not Causing Present Adverse Effects through a Price Effects Causal Mechanism.	227
3.	Non-Attribution Factors.....	233
E.	Aggregation.....	236
1.	Aggregation of Alleged Subsidies is Only Appropriate Where There Is a Sufficient Interrelationship among Them for a Panel to Infer They Operate Collectively.	236
2.	Alleged R&D Subsidies: The EU Has Provided No Valid Reason to Aggregate FAA with NASA and DoD, or to Attribute Any Price Effects to An Individual or Aggregated Group of Alleged R&D Subsidies.	237
3.	Alleged Tied Tax Subsidies: The EU Errs in Aggregating Alleged Tied Tax Subsidies that Relate to Different Aircraft.	239
4.	Miscellaneous Subsidies: The EU Groups Widely Disparate Subsidies That Have Not Been Shown to Share a Similar Design, Structure, and Operation.	239
F.	Cumulation of Alleged Subsidies’ Effects.....	240
1.	The EU Misapplies the Cumulation Standard.	240
2.	The EU’s Vague Cumulation Arguments Do Not Permit Assessment under the Appellate Body’s Paradigm.	241
3.	The EU Cannot Argue for Cumulation of the Effects of R&D Subsidies with the Effects of Tied Tax Subsidies or Miscellaneous Subsidies in this Compliance Proceeding.	244
G.	The EU Has Failed to Allege a <i>Prima Facie</i> Case with Respect to Alleged Price Suppression of the A330.....	245
H.	The EU Has Failed to Demonstrate that Alleged Subsidies to the 787 and/or the 777X Cause Adverse Effects Through Significant Price Suppression, Significant Lost Sales, Impedance, or Threat Thereof With Respect to the A350 XWB.....	246
1.	Causation.....	247
a.	Alleged Technology Effects	247

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

i.	The EU Fails to Demonstrate Technology Effects through the 787 on the A350 XWB.	247
(a)	The Counterfactual 787 Launch Timing Analysis Should Be Informed by Airbus’s Rapid Development of the A350 XWB.....	248
(b)	The Counterfactual 787 Launch Timing Analysis Should be Informed by the Original Panel’s Findings Regarding the Non-Subsidy Capabilities of Boeing and Its Suppliers.....	249
(c)	The Counterfactual 787 Launch Would Have Occurred no Later than 2006.	251
(d)	The EU Has Failed to Demonstrate 787 Technology Effects Arising After 2007.....	255
(e)	Conclusion	255
ii.	The EU Fails to Demonstrate Technology Effects through the 777X on the A350 XWB.	256
(a)	Alleged Original Subsidy “Spillover Effects” from the 787 to the 777X.....	257
(b)	Alleged Original Subsidy Sleeper Effects – Folding Wing Tip.....	258
(c)	Alleged Original Subsidy “Sleeper Effects” and New Subsidy Effects – [[HSBI]].	258
(d)	Conclusion	259
b.	Alleged Price Effects	259
2.	The EU Fails to Demonstrate Significant Price Suppression with Respect to the A350 XWB.....	262
3.	The EU Fails to Demonstrate Threat of Significant Price Suppression with Respect to the A350 XWB.....	266
4.	Alleged Significant Lost Sales.....	267
a.	Original Proceeding Lost Sales.....	267
i.	Qantas	267
ii.	Ethiopian Airways	268
iii.	Icelandair	269
iv.	Kenya Airways	269
b.	The Lost Sales Claims Rejected by the Original Panel, and Not Appealed, Cannot Be Re-Litigated; Even if Analyzed	

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

Again, They Should Be Rejected Again for the Same Reasons.....	270
i. All Nippon Airways	270
ii. Japan Airlines	270
iii. Air Canada	271
iv. Continental Airlines	271
v. Northwest Airlines	272
c. New Lost Sales Claims.....	272
i. Qatar Airways	273
ii. British Airways	274
iii. Air Berlin	275
iv. LAN Airlines	275
v. ILFC	276
vi. Virgin Atlantic Airways	277
vii. Etihad Airways	278
viii. United Airlines	278
ix. Air France – KLM	279
x. Aeromexico	280
xi. Lion Air	280
5. Threat of Significant Lost Sales.....	281
6. Impedance and Threat Thereof.....	281
a. The EU Has Failed to Demonstrate Impedance or Threat thereof under Article 6.3(a) of the SCM Agreement.....	284
b. The EU Has Failed to Demonstrate Impedance or Threat thereof in Third-Country Markets under Article 6.3(b) of the SCM Agreement.....	285
i. Canada (alleged threat of impedance)	285
ii. Chile (alleged impedance and threat thereof)	287
iv. China (alleged threat of impedance)	287
v. Ethiopia (alleged impedance and threat thereof)	287
vi. Iceland (alleged threat of impedance)	288
vii. India (alleged impedance and threat thereof)	289
viii. Japan (alleged impedance and threat thereof)	290
ix. Kenya (alleged threat of impedance)	291
x. Mexico (alleged threat of impedance)	292
xi. Qatar (alleged impedance and threat thereof)	292
xii. UAE (alleged threat of impedance)	292
xiii. Indonesia (alleged threat of impedance)	293

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS353)*

First Written Submission of the United States
June 27, 2013 – Page xv

xiv.	Australia	293
I.	The EU Has Failed to Demonstrate that Alleged Subsidies to the 737 MAX Cause Adverse Effects in the Form of Significant Price Suppression, Significant Lost Sales, Impedance, or Threat of Impedance With Respect to the A320neo.	294
1.	Causation.....	294
a.	Alleged Technology Effects	294
i.	Alleged New Subsidy Effects – NASA Subsonic Fixed Wing Project	296
ii.	Alleged “Spillover Effects” – Engine Integration/Coupling	297
iii.	Alleged “Spillover Effects” – Tail Cone	298
iv.	Alleged “Spillover Effects” – Fly-by-Wire Spoilers	298
v.	Alleged New Subsidy Effects – Flight Deck Displays	299
vi.	Alleged New Subsidy Effects – Testing under the FAA CLEEN 2012 ecoDemonstrator Program	300
vii.	Conclusion	301
b.	Alleged Price Effects	301
2.	Significant Price Suppression	304
3.	Significant Lost Sales	306
a.	American Airlines.....	307
b.	Southwest Airlines	308
c.	United Airlines.....	308
d.	SilkAir.....	308
e.	GOL	309
f.	Norwegian Air Shuttle	309
g.	Lion Air.....	310
h.	Avolon.....	310
i.	Air Lease Corp.....	311
j.	GECAS	311
k.	Aviation Capital Group.....	311
l.	Icelandair.....	311
m.	Aeromexico.....	312
4.	Threat of Impedance	312

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

a.	The EU Has Failed to Demonstrate Threat of Impedance under Article 6.3(a) of the SCM Agreement.	314
b.	The EU Has Failed to Demonstrate Threat of Impedance in Third-Country Markets.	314
i.	Brazil	314
ii.	Iceland	315
iii.	Indonesia	315
iv.	Mexico	316
v.	Norway	316
vi.	Singapore	317
J.	The EU Has Failed to Demonstrate that Alleged Subsidies to the 737NG Cause Adverse Effects Through Significant Price Suppression, Significant Lost Sales, Displacement, Impedance, or Threat Thereof With Respect to the A320ceo.	317
1.	Alleged Price Effects Causal Mechanism.....	317
2.	Significant Price Suppression	320
3.	Significant Lost Sales	321
a.	Delta Airlines	322
b.	Fly Dubai	322
4.	The EU Has Failed to Demonstrate Impedance or Threat thereof under Article 6.3(a) of the SCM Agreement.	322
5.	The EU Has Failed to Demonstrate Displacement, Impedance, and/or Threat Thereof in Third-Country Markets.....	323
a.	Australia (alleged displacement and threat thereof)	323
b.	Brazil (alleged threat of displacement)	324
c.	Canada (alleged impedance and threat thereof)	324
d.	Indonesia (alleged displacement, impedance, and threat of impedance).....	325
e.	Malaysia (alleged displacement).....	325
f.	Norway (alleged impedance and threat thereof).....	326
g.	Russia (alleged threat of displacement)	326
h.	Singapore (alleged threat of impedance)	326
i.	UAE (alleged displacement and threat of impedance)	327

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

TABLE OF REPORTS

Short Title	Full Case Title and Citation
<i>Canada – Aircraft (AB)</i>	Appellate Body Report, <i>Canada – Measures Affecting the Export of Civilian Aircraft</i> , WT/DS70/AB/R, adopted 20 August 1999, DSR 1999:III, 1377
<i>Canada – Aircraft (21.5) (AB)</i>	Appellate Body Report, <i>Canada – Measures Affecting the Export of Civilian Aircraft – Recourse by Brazil to Article 21.5 of the DSU</i> , WT/DS70/AB/RW, adopted 4 August 2000, DSR 2000:IX, 4299
<i>Canada – Renewable Energy (AB)</i>	Appellate Body Report, <i>Canada – Certain Measures Affecting the Renewable Energy Generation Sector</i> , WT/DS426/AB/R.
<i>Chile – Price Band System (21.5) (AB)</i>	Appellate Body Report, <i>Chile – Price Band System and Safeguard Measures Relating to Certain Agricultural Products – Recourse to Article 21.5 of the DSU by Argentina</i> , WT/DS207/AB/RW, adopted 22 May 2007, DSR 2007:II, 513
<i>China – Auto (AB)</i>	Appellate Body Report, <i>China – Measures Affecting Imports of Automobile Parts</i> , WT/DS340/AB/R.
<i>China – Raw Materials (AB)</i>	Appellate Body Report, <i>China – Measures Related to the Exportation of Various Raw Materials</i> , WT/DS394/AB/R, WT/DS395/AB/R, WTDS398/AB/R, adopted 22 February 2012
<i>EC – Bed Linen (21.5) (AB)</i>	Appellate Body Report, <i>European Communities – Anti-Dumping Duties on Imports of Cotton-Type Bed Linen from India – Recourse to Article 21.5 of the DSU by India</i> , WT/DS141/AB/RW, adopted 24 April 2003, DSR 2003:III, 965
<i>EC – Hormones (AB)</i>	Appellate Body Report, <i>European Communities – Measures Concerning Meat and Meat Products (Hormones)</i> , WT/DS26/AB/R, WT/DS48/AB/R, adopted 13 February 1998
<i>EC – Large Civil Aircraft (AB)</i>	Appellate Body Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft</i> , WT/DS316/AB/R, adopted 1 June 2011
<i>EC – Large Civil Aircraft (Panel)</i>	Panel Report, <i>European Communities and Certain Member States – Measures Affecting Trade in Large Civil Aircraft</i> , WT/DS316/R, adopted 1 June 2011, as modified by Appellate Body Report, WT/DS316/AB/R
<i>Japan – Apples (AB)</i>	Appellate Body Report, <i>Japan – Measures Affecting Agricultural Products</i> , WT/DS76/AB/R, adopted 19 March 1999

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS353)*

First Written Submission of the United States
June 27, 2013 – Page xviii

Short Title	Full Case Title and Citation
<i>Korea – Commercial Vessels</i>	Panel Report, <i>Korea – Measures Affecting Trade in Commercial Vessels</i> , WT/DS273/R, adopted 11 April 2005, DSR 2005:VII, 2749
<i>Mexico – Corn Syrup (21.5) (AB)</i>	Appellate Body Report, <i>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</i> , WT/DS132/AB/RW, adopted 21 November 2001, DSR 2001:XIII, 6675
<i>US – AD/CVD (Panel)</i>	Panel Report, <i>United States – Definitive Anti-Dumping and Countervailing Duties on Certain Products from China</i> , WT/DS379/R, 2010, adopted 25 March 2011, as modified by Appellate Body Report WT/DS379/AB/R.
<i>US – Large Civil Aircraft (Panel)</i>	Panel Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint)</i> , WT/DS353/R, circulated on 31 March 2011
<i>US – Large Civil Aircraft (AB)</i>	Appellate Body Report, <i>United States – Measures Affecting Trade in Large Civil Aircraft (Second Complaint)</i> , WT/DS353/AB/R, adopted 23 March 2012
<i>US – Lumber CVDs (AB)</i>	Appellate Body Report, <i>United States – Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada</i> , WT/DS257/AB/R, adopted 17 February 2004, DSR 2004:II, 571
<i>US – Lumber CVDs (21.5) (AB)</i>	Appellate Body Report, <i>United States – Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada – Recourse by Canada to Article 21.5 of the DSU</i> , WT/DS257/AB/RW, adopted 20 December 2005, DSR 2005:XXIII, 11357
<i>US – Shirts and Blouses (AB)</i>	Appellate Body Report, <i>United States – Measures Affecting Imports of Woven Wool Shirts and Blouses from India</i> , WT/DS33/AB/R.
<i>US – Softwood Lumber VI (21.5)</i>	Appellate Body Report, <i>United States – Investigation of the International Trade Commission in Softwood Lumber from Canada – Recourse to Article 21.5 of the DSU by Canada</i> , WT/DS277/AB/RW, adopted 9 May 2006, and Corr.1, DSR 2006:XI, 4865

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS353)*

First Written Submission of the United States
June 27, 2013 – Page xix

Short Title	Full Case Title and Citation
<i>US – Upland Cotton (21.5) (AB)</i>	Appellate Body Report, <i>United States – Subsidies on Upland Cotton – Recourse to Article 21.5 of the DSU by Brazil</i> , WT/DS267/AB/RW, adopted 20 June 2008, DSR 2008:III, 809
<i>US – Zeroing (EC) (21.5) (AB)</i>	Appellate Body Report, <i>United States – Laws, Regulations and Methodology for Calculating Dumping Margins ("Zeroing") – Recourse to Article 21.5 of the DSU by the European Communities</i> , WT/DS294/AB/RW and Corr.1, adopted 11 June 2009

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

TABLE OF ABBREVIATIONS AND ACRONYMS

ACRONYM/SHORT FORM	FULL PHRASE
ARMD	Aeronautics Research Mission Directorate
BCI/HSBI Procedures	Additional Working Procedures for the Protection of Business Confidential Information and Highly Sensitive Business Information
CASP	Cross Agency Support Programs
CFD	computational fluid dynamics
CLEEN	Continuous Lower Energy, Emissions, and Noise
DoD	Department of Defense
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
ETDP	Exploration Technology Development Program
EU Panel Request	<i>Request for the Establishment of a Panel by the European Communities</i> , WT/DS317/5, p. 13 (23 Jan. 2006).
EU PR Response	<i>European Union Response to the United States Requests for Preliminary Rulings</i> (Nov. 23, 2012)
EU PRR	European Union Request for a Preliminary Ruling; Request for the Panel to Exercise its Authority Pursuant to Article 13 of the DSU (Oct. 31, 2012)
EU Supplemental Submission	Supplementary Submission of the European Union on the United States Requests for Preliminary Rulings (May 13, 2013)
FAA	Federal Aviation Administration
FAP	Fundamental Aeronautics Program
HSR Program	High Speed Research Program
IRB	Industrial Revenue Bond
ISRP	International Space Research Park
ITAR	International Traffic in Arms Regulations
JCATI	Joint Center for Aerospace Technology and Innovation
LERD	Limited Exclusive Rights Data
MPCV	Multipurpose Crew Vehicle
NASA	National Aeronautics and Space Administration
NESC	NASA Engineering and Safety Center
NRA	NASA Research Announcement
OTA	Other Transaction Agreement
PRSEUS	Pultruded Rod Stitched Efficient Unitized Structure
R&D	Research and development
SAA	Space Act Agreement
TIA	Technology Investment Agreement

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS353)*

First Written Submission of the United States
June 27, 2013 – Page xxii

US Comments on EU Questions	Comments by the United States on Questions Proposed by the European Union for the Panel to Use to Seek Information Pursuant to Article 13 of the DSU, pp. 3-4 (Nov. 20, 2012).
US Compliance Notification	Notification of the Withdrawal of Subsidies and Removal of Adverse Effects in <i>United States -- Measures Affecting Trade in Large Civil Aircraft (Second Complaint)</i>
US PR Response	<i>Reply of the United States of America to the EU Response to the U.S. Requests for Preliminary Rulings (Dec. 3, 2012)</i>
VSP	Vehicle Systems Program

INTRODUCTION

1. Much has changed since 2006, the last year covered by the original panel's findings in *US – Large Civil Aircraft*. The National Aeronautics and Space Administration (“NASA”) and U.S. Department of Defense (“DoD”) have both dramatically reduced the number and value of the types of research transactions with Boeing that were found to be inconsistent with the SCM Agreement – NASA by more than half, and DoD by even more. But even more significantly, NASA has changed the way it conducts research, setting research objectives through an open and transparent process, focusing more on early stage foundational research, eliminating restrictions on the government's data rights, and otherwise committing to make more results available more quickly. NASA and DoD also renegotiated the division of intellectual property rights under the contracts and agreements covered by the original panel and Appellate Body findings so as to make them consistent with commercial transactions. And the City of Wichita has ceased granting Industrial Revenue Bonds to Boeing. Through these actions, the United States has either withdrawn the relevant subsidies or taken appropriate steps to remove their adverse effects. The United States has accordingly complied fully with the recommendations and rulings of the DSB.

2. The EU ignores these new facts. It does not grapple with the changes in how NASA performs research and, accordingly, never makes the legal showing that it considers critical to its *prima facie* case, namely, that NASA's current transactions, as they occur in 2013, are subsidies. Although six and one-half years have passed, the EU starts with the assumption that the old aeronautics R&D subsidies are having exactly the same today that they did in 2006, and then proposes that in actuality, those effects actually grew. It gives these supposed developments ominous-sounding epithets – “sleeper” effects and “spillover” effects – but cannot hide that this notion of old technologies becoming more useful with time is at odds with both commercial reality and the original panel's finding that, over 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.”¹ The EU's willful ignorance is particularly disturbing given that the United States spent months of effort to provide more than 22,700 pages of documents that the EU insisted were critical to its case, in response to the Panel's request for information under DSU Article 13. These materials indicate the nature of the research conducted and the terms of the transactions, and disprove the EU's subsidization and adverse effects theories.

3. The EU simply assumes that the accelerated development of technology for the 787 found by the original Panel remains relevant today and, therefore, that the 787 today continues to enjoy those advantages. But there is no basis to assume that Boeing would not have developed the 787 over the intervening years, and the EU has not even tried to support that obviously implausible story. As Boeing engineers set out in great detail in a report supplied with this submission, the technology advances identified by the original Panel would have been developed by Boeing by 2006, just as Airbus was able to make similar technology advances for its own launch of the A350XWB by 2006 – that is, well before the end of the implementation period.

¹ *US – Large Civil Aircraft (Panel)*, para. 7.1758.

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*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 2

And as the 787 with those technology advances would have been on the market, the EU has no plausible causation story in this proceeding

4. The compliance Panel will have noticed the unprecedented length, complexity, and unfocused nature of the EU's first submission. Such an approach would appear to relate to the lack of any plausible and coherent theory of how subsidies received by Boeing caused adverse effects. The EU does seem to recognize that it cannot make out a *prima facie* case of non-compliance on the basis of the current facts, and so instead it ignores and distorts them, and seeks to rely on a different set of facts by expanding the scope of the proceeding to issues unrelated to U.S. compliance. Indeed, the EU has gone to extraordinary lengths to resurrect claims and arguments that it lost in the original proceeding and to bring new claims with regard to measures that it could have challenged in 2005, but chose not to, or that are otherwise clearly outside the terms of reference of this Panel. Thus, for example, the EU:

- seeks again to challenge alleged benefits derived by Boeing from having access to certain DoD equipment and employees, and which the original panel found were excluded from the EU's original panel request;
- revives claims against Program Elements under several DoD programs that already existed at the time of the EU panel request in the original panel proceedings, or that continue work under programs that existed at that time, but which the EU did not originally challenge;
- seeks again to challenge DoD procurement contracts – even though that challenge was rejected by the original panel previously (and for which it then specifically asked the Appellate Body *not* to complete the analysis);
- seeks to re-challenge certain Washington State and local measures for which there were no DSB recommendations and rulings;
- raises entirely new claims with regard to environmental programs of the U.S. Federal Aviation Authority; and
- raises entirely new claims with regard to economic development programs in the State of South Carolina that are not measures taken to comply, in particular that have no nexus to any of the U.S. measures taken to comply or the DSB recommendations and rulings

The United States understands the EU's need to grasp at any measure it can identify to try to build up the semblance of support for its missing economic / causation story. But, as the United States indicated in its request for preliminary rulings, these claims and measures have no place in a compliance proceeding. The United States accordingly renews its request for a preliminary ruling that these measures are not within the Panel's terms of reference.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 3

5. But, aside from the fact that these measures are not within the Panel’s terms of reference, the EU’s complaint still fails. The South Carolina measures challenged by the EU, for example, are *not* specific subsidies and do *not* confer a benefit to Boeing, and in any event are too different to be aggregated or cumulated with the subsidies previously found to exist and too small by themselves to have caused adverse effects. The new DoD measures that the EU seeks to include relate to technology areas far afield from large civil aircraft technology – they relate, for example, to development of a “Hunter-Killer” machine and advanced tactical laser turrets.² In any event they were, for the most part, competitive transactions in which the government paid no more remuneration than was adequate, which is all that the SCM Agreement requires. The FAA project that the EU challenges – even if it were a specific subsidy – is too insignificant in terms of scope and size to make a meaningful difference to Boeing’s knowledge capabilities.

6. Finally, the EU does not show that, even if it is correct about this alleged ongoing subsidization, the subsidies are having effects in the market. Airbus no longer suffers any technological disadvantages because of subsidies and, in fact, enjoys a commanding position in the product markets at issue. In the twin-aisle market, the 787’s head start has evaporated, Boeing’s aeronautics R&D activity with the U.S. government is much reduced and more remote from commercial application, and Airbus enjoys much greater access to the results of that work. Meanwhile, Airbus head salesman John Leahy recently proclaimed that, “{o}ur A350 XWB has been out-selling the 787 by better than 2- to-1 over the last five years.”³

7. In the single-aisle market, it was Airbus, not Boeing, that had a head start with a re-engined aircraft, the A320neo. Here too, Airbus is justifiably pleased with its position: “our A320neo Family retains a 60 percent market share lead. That’s a ‘corner’ I want to stay boxed into.”⁴ Airbus built a good part of that market share by taking business from major Boeing customers like American Airlines and Lion Air, yet the EU complains that Airbus should have flipped more Boeing accounts. The only adverse effects experienced by the A320 in the underlying dispute were two lost sales campaigns, and that was based on the effects of more than \$2 billion in FSC/ETI tax subsidies. Boeing has not been receiving FSC/ETI benefits since 2006, and there are no longer any subsidies that could cause adverse effects.

8. In short, the EU tries to revive numerous claims that it already lost or could have included in its original complaint (or its appeal), but did not; it challenges measures that are not measures taken to comply; and it fails to properly account for extensive changes with respect to the WTO-inconsistent subsidies, which the United States documented in response to the Panel’s Article 13 questions, which the EU specifically requested. These many errors mean that the EU has failed to meet its burden, and has not made a *prima facie* case, as the United States will discuss in greater detail in the submission below.

² Section III.E.3.a.iii describes these contracts.

³ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-267).

⁴ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-267).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 4

9. In closing this introduction, the United States notes that it has focused this submission on the key points raised in the EU first written submission. Silence with regard to any issue should be understood as silence, rather than agreement with a position we have not addressed.

I. PROCEDURAL HISTORY

A. Recommendations and Rulings of the DSB

10. The EU first written submission purports to summarize the findings in the original panel and Appellate Body reports in a two-paragraph passage. In so doing, it omits key elements of those findings. In fact, the actionable subsidies found to exist were:

- “payments and access to facilities, equipment, and employees provided under the NASA procurement contracts” under eight named NASA aeronautics research programs;⁵
- “access to NASA facilities, equipment and employees provided to Boeing through the R&D . . . agreements at issue;”⁶
- “in relation to the measures under the 23 USDOD RDT&E programmes at issue . . . payments and access to facilities provided under the USDOD assistance instruments;”⁷
- the Washington B&O tax rate reduction;⁸
- City of Wichita IRBs;⁹ and
- “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.”¹⁰

11. The EU fails to note that the original panel and the Appellate Body found that the adverse effects of these subsidies were limited to:

- for the NASA and DoD research measures, threat of displacement and impendance of exports from Australia,¹¹ significant lost sales, and price suppression in the 200-300 seat large civil aircraft market;¹² and

⁵ *US – Large Civil Aircraft (AB)*, para. 1350(b)(ii).

⁶ *US – Large Civil Aircraft (Panel)*, para. 7.1027.

⁷ *US – Large Civil Aircraft (AB)*, para. 1350(b)(iii).

⁸ *US – Large Civil Aircraft (AB)*, para. 1350(b)(iv).

⁹ *US – Large Civil Aircraft (AB)*, para. 1350(d)(iv).

¹⁰ *US – Large Civil Aircraft (Panel)*, para. 7.1429.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 5

- for the Washington B&O tax rate reduction, the City of Wichita IRBs, and the FSC/ETI measures, significant lost sales in the 100-200 seat large civil aircraft market in the form 50 firm orders and 30 options that Boeing sold to Japan Airlines and Singapore Aircraft Leasing Enterprise.¹³

12. The EU also fails to note that under the DSB recommendations and rulings, some measures were *not* actionable subsidies:

- The allocation of patent rights and data rights between NASA and DoD on the one hand and Boeing on the other;¹⁴ and
- Washington State sales tax exemptions for construction services and equipment, the leasehold tax exemption, and the property tax exemption granted pursuant to House Bill 2294;¹⁵
- Washington State B&O tax credits for preproduction development and property taxes;¹⁶
- Washington State sales and use exemptions for computer hardware, software and peripherals;¹⁷
- The City of Everett B&O tax rate;¹⁸ and
- Various measures in connection with the production of Boeing's 787 under the *Project Olympus Master Site Development and Location Agreement between the Boeing Company and the State of Washington* (the "MSA");¹⁹

¹¹ *US – Large Civil Aircraft (Panel)*, para. 8.3(a)(i) and *US – Large Civil Aircraft (AB)*, para. 1350(d)(i)(A)(5).

¹² *US – Large Civil Aircraft (AB)*, para. 1350, subparagraphs (d)(i)(A)(4) and (d)(i)(A)(6).

¹³ *US – Large Civil Aircraft (AB)*, paras. 1271-1272 and 1350(d)(iii)(B).

¹⁴ *US – Large Civil Aircraft (AB)*, para. 1350(c)(i) and *US – Large Civil Aircraft (Panel)*, para.7.1311.

¹⁵ *US – Large Civil Aircraft (AB)*, para. 10.

¹⁶ *US – Large Civil Aircraft (Panel)*, para. 7.1834.

¹⁷ *US – Large Civil Aircraft (Panel)*, para. 7.1834.

¹⁸ *US – Large Civil Aircraft (AB)*, para. 1350(d)(iii)(A).

¹⁹ *US – Large Civil Aircraft (AB)*, para. 10. These measures include (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 ("LCFs") 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

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 6

13. Finally, the EU fails to note that the Appellate Body rejected the EU's claims of market displacement and impedance, threat of market displacement and impedance, and price suppression in the 100-200 seat market, as well of all of the EU's claims of adverse effects in the 300-400 seat market.

14. The recommendations and rulings formed the basis for the U.S. decision as to the compliance measures it took to withdraw subsidies, and the steps it took to remove adverse effects. As such, those recommendations and rulings, correctly stated and in their full breadth or narrowness, form the basis for any evaluation as to whether the United States complied with its obligations.

B. U.S. Measures Taken to Comply

15. The Appellate Body issued its report on March 12, 2012, and the DSB adopted the original panel report, as modified by the Appellate Body report, on March 23, 2012. The United States consulted with NASA, DoD, the Department of the Treasury, authorities of the State of Washington and City of Wichita, and Boeing to determine the current status of the financial contributions found to be subsidies. These consultations indicated that:

- NASA had terminated most of the programs subject to the recommendations and rulings of the DSB, changed many of the practices that led to the original panel's subsidy findings, and reduced substantially the amount of money it spends on aeronautics research.
- DoD had terminated some of the 23 program elements subject to the recommendations and rulings of the DSB, and substantially reduced the amount of funding it provided to Boeing under cooperative agreements, TIAs, and OTAs.
- The State of Washington was applying the B&O tax such that the magnitude of any subsidy remained too small to have adverse effects.
- As a result of Boeing's closure of its remaining facilities in Wichita, the value of IRBs to Boeing had fallen to minuscule levels.
- The FSC program and its successor programs remained terminated, and Boeing had not received FSC or successor program benefits and had no plans to seek such benefits.

16. The United States carefully considered the recommendations and rulings of the DSB with regard to the tax measures. It concluded that the Wichita IRBs and the withdrawn FSC program no longer had any genuine relationship to the prices Boeing charged for its aircraft. Consistent

"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 incurs in relation to the MSA.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 7

with the Panel’s findings, the United States considered that the B&O tax rate reduction by itself was insufficient to cause adverse effects, and that there was no basis to cumulate the benefit of the B&O tax rate reduction with any other subsidy.

17. The United States carefully considered the recommendations and rulings of the DSB with regard to the NASA contracts and SAAs and the DoD agreements, and concluded that the measures no longer had the adverse effects found to exist, and were not causing any further adverse effects. Nonetheless, in an abundance of caution, the United States decided to withdraw the subsidy found to exist.

18. With a view to modifying contracts so as to put them on terms consistent with commercial practice, the United States identified the contracts and cooperative agreements funded through the eight NASA aeronautics research programs covered by the DSB recommendations and rulings, as well as those funded through aeronautics research programs in place during the 2007-2012 period. NASA accomplished this by reference to its databases, which provided a list of contracts issued through the four aeronautics research centers. As the finding of subsidization focused on the division of patent rights, which is identical in all NASA contracts, there was no need to gather every contract.

19. The United States identified *all* cooperative agreements, TIAs, and OTAs related to research between DoD and Boeing during the 1992-2012 period, and then consulted available records indicating the program elements that funded those agreements. Where it was possible to verify that an agreement involved no payments under any of the 23 program elements, the United States eliminated it from the data set. In the instance of Air Force, DARPA, and Army agreements, this process involved physically checking the accounting information contained in each agreement and modification. Therefore, out of an abundance of caution, in each instance where the United States could not obtain a copy of the agreement, it assumed that the agreement was subject to the recommendations and rulings of the DSB. The accounting information in Navy agreements does not allow identification of the funding source, and the Navy was unable during the six-month compliance period to identify other information indicating funding. Therefore, the United States assumed that all of the Navy agreements were subject to the recommendations and rulings of the DSB.

20. Based on the findings of the panel and the Appellate Body and the information on the record of the dispute, NASA and DoD entered into negotiations with Boeing to modify the patent attribution terms in NASA contracts and DoD agreements to bring them in line with a commercial benchmark. This effort produced the NASA Licensing Agreement and the DoD Licensing Agreement, which were signed on September 21 2013.²⁰ The United States notified the EU and the DSB of these measures, along with other modifications to the measures covered by the DSB recommendations and rulings on September 23, 2013 (“U.S. Compliance Notification”).

²⁰ NASA License Agreement (Exhibit EU-251(BCI)) and DoD License Agreement (Exhibit EU-0401).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 8

C. Compliance Proceedings and Gathering of Information

21. The EU requested consultations²¹ with the United States on September 25, 2012, the day after receiving the U.S. Compliance Notification. Pursuant to a procedural agreement between the parties,²² those consultations occurred on October 10, 2012. They did not settle the dispute. The EU requested establishment of a panel to consider its claims under Article 21.5 of the DSU on October 11, 2012.²³ This Panel was established at the DSB meeting on October 23, 2012.²⁴

22. At that time, the EU also requested the initiation of information-gathering procedures under Annex V of the SCM Agreement.²⁵ At the DSB meeting on October 23, the United States indicated its view that the SCM Agreement did not provide for use of the Annex V procedure in a compliance proceeding. However, it offered to work with the EU to develop procedures “analogous to the Annex V procedure, such that there would be a specified timeframe and the procedure would be assisted by a neutral entity.”²⁶ The EU refused this offer,²⁷ and sent a letter to the DSB chair asking him to implement procedures for an Annex V procedure and send the United States a set of questions drafted by the EU.²⁸ The United States responded on October 24, and the parties engaged in a vigorous exchange of views. The DSB Chair did not take action with regard to the EU’s requests.

23. On October 30, 2012, this Panel was composed. On October 31, 2013, the EU submitted a preliminary ruling request to the Panel indicating that it sought an Annex V procedure and asked the Panel to invoke Article 13 of the DSU to ask the United States to answer questions drafted by the EU.²⁹ The parties engaged in a detailed exchange of the permissibility of the EU’s request. On November 13, the United States requested preliminary rulings that certain EU claims were not properly within the Panel’s terms of reference. The United States then asked the Panel, if it sought information under Article 13 of the DSU, to seek information from the EU,

²¹ WT/DS353/16. The United States does not agree with the EU that these consultations were properly requested, nor were they held, under Articles 4 and 21.5 of the DSU, Article XXIII of the GATT 1994, or the SCM Agreement (EU FWS paras. 12-13).

²² WT/DS353/14

²³ EU Panel Request.

²⁴ Minutes of Meeting Held in the Centre William Rappard on 23 October 2012, WT/DSB/M/323, para. 81 (13 December 2012).

²⁵ EU Panel Request, para. 35.

²⁶ Minutes of Meeting Held in the Centre William Rappard on 23 October 2012, WT/DSB/M/323, para. 85 (13 December 2012).

²⁷ Minutes of Meeting Held in the Centre William Rappard on 23 October 2012, WT/DSB/M/323, para.86 (13 December 2012).

²⁸ Letter from the EU to the DSB Chair, p. 2 (Oct. 23 2012).

²⁹ EU PRR, para. 1.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 9

and suggested questions relevant to the inquiry.³⁰ On November 20, the United States submitted comments on the EU proposed questions, and requested that if the Panel chose to use those questions to seek information, it provide sufficient time for the United States to respond. The United States noted that simply gathering the information for most of the questions would take six to eight weeks, but that it was impossible to estimate for some of the questions. The United States also observed that review for BCI/HSBI and export controlled information would take additional time after the end of that process of gathering the information.³¹

24. On November 26, the Panel issued a preliminary ruling that Annex V procedures are available in compliance proceedings, and that the EU's request met the conditions for automatic initiation of such procedures.³² However, the Panel considered that the EU had withdrawn its request for an Annex V procedure, and asked instead that the Panel seek information under Article 13.³³ The Panel granted this request. It indicated that it would consider also seeking information from the EU.³⁴ The Panel also gave the EU the opportunity to comment on the U.S. comments on the EU proposed questions.³⁵

25. The Panel modified some of the questions suggested by the EU, and issued the questions applicable to NASA and DoD programs on December 5, with instructions to submit responses by February 28, 2013.³⁶ On December 7, the EU asked the Panel to expedite the due date for certain responses "such that the European Union can understand as soon as possible the content of the US declared measures taken to comply with respect to NASA and DOD R&D measures."³⁷ On December 18, the Panel issued its remaining questions, setting a due date of February 28, 2013. The Panel granted the EU request to expedite the due date for questions 1-4, 11, 23-24, and 30. The Panel also asked the EU to respond to certain questions.³⁸

26. The United States will not recount at length the massive effort it took to respond to the Panel's questions. As a general matter, for each of the subsidy questions, the United States first had to identify individuals at each state and agency knowledgeable about the measures

³⁰ Request by the United States for the Panel to Request Information from the European Union Pursuant to Article 13 of the DSU (19 Nov. 2012).

³¹ US Comments on EU Questions, pp. 3-4.

³² Preliminary Rulings and Decisions Regarding Information Gathering under Article 13 of the DSU, paras. 30 and 33.

³³ Preliminary Rulings and Decisions Regarding Information Gathering under Article 13 of the DSU, para. 35.

³⁴ Preliminary Rulings and Decisions Regarding Information Gathering under Article 13 of the DSU, para. 49.

³⁵ Preliminary Rulings and Decisions Regarding Information Gathering under Article 13 of the DSU, para. 47.

³⁶ Communication from the Panel to the Parties (5 December 2012).

³⁷ Letter from the EU to the Panel, p. 2 (Dec. 7, 2012).

³⁸ Communication from the Panel to the Parties, p. 3 (18 December 2012).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 10

challenged by the EU. For new measures, this required identifying the correct offices and finding the right staff, while many of the relevant staff who worked on the original dispute had moved to new responsibilities. For all measures, we worked to devise information gathering procedures that took into account new sources of information and improvements in existing databases.

27. It proved impossible for the United States to both gather and review the materials that the Panel requested in the first stage of information gathering.³⁹ The United States notified the Panel of that fact, and indicated that it expected to have a complete response shortly. The United States provided 97 documents consisting of 3,450 pages on January 25, 2013. The United States provided an additional 15 documents on February 14, 2013, but once again found it impossible to complete the review of all of the materials. On February 28, the United States provided its responses to all of the questions, consisting of more than 440 documents. At that point, it informed the Panel that BCI/HSBI and export control review of the responsive materials would not be complete until March 22. On that date, the United States submitted the remainder of the available material, making a total of **22,700** pages and 717 documents

28. All documents needed to be checked for BCI and HSBI. Boeing informs us that, in light of the breadth of the requests and the large number of issues raised, each document had to be reviewed by multiple individuals. This was typically an iterative process to ensure that individual pieces of information that might seem benign in isolation did not reveal more when combined with other information.

29. Any NASA, DoD, or FAA documents containing technical information also had to be checked to ensure that they did not contain information prohibited from export under U.S. export control laws. Each NASA or DoD document had to be delivered by hand to DTSA's secure facility, categorized by subject area, and reviewed by a staff member with knowledge of that area. The individual would review each page and, where there was a question about applicability of export controls, consult other materials to resolve the question, and annotate the document to indicate the basis for control. Where documents involved multiple subject areas, multiple staff members had to participate in the review. One of DTSA's office chiefs performed quality check for all documents containing controlled information. The results of DTSA's export control review then had to be combined with the results of the BCI/HSBI review, and the final version

³⁹ In this process, the United States discovered that some of the NASA contracts contained information classified for national security reasons, which it is precluded by law from providing to persons without the appropriate clearance levels, as well as export-controlled information. In its first written submission, the EU criticizes the United States for not having sought amendments to the working procedures to provide for submission of such materials. EU FWS, para. 23. In fact, the U.S. Comments on EU Questions indicated that the United States planned to redact ITAR-controlled information from any documents, as it did in the original proceedings. U.S. Comments on EU Questions, general comment 6. Paragraph 60 of the BCI/HSBI Procedures further indicates the Panel's understanding that existing rules were not sufficient for the submission of ITAR-controlled or classified information. In that light, the United States interpreted the Panel's questions to exclude such information. Indeed, to our knowledge, no WTO panel has ever requested a party to provide national security classified information or export controlled information in a WTO dispute, and the EU has provided no reason for doing so for the first time in this proceeding.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 11

checked again to ensure that it correctly reflected the results of the earlier reviews and contained all necessary markings.

II. REVIEW UNDER ARTICLE 21.5 OF MEASURES TAKEN TO COMPLY

A. An Article 21.5 Proceeding concerns the Existence of the Responding Member’s Measures Taken to Comply and Their Consistency with the Covered Agreements, and the Reargument of Issues Settled in the Original Proceedings.

30. Article 21.5 of the DSU provides an expedited proceeding in situations “{w}here there is disagreement as to the existence or consistency with a covered agreement of measures taken to comply with the recommendations and rulings” of the DSB. Thus, the subject matter is narrower than for original proceedings under Articles 4 and 6 of the DSU, which may cover any measure and any of the covered agreements.⁴⁰ In an Article 21.5 proceeding, the only measures at issue are those taken to comply with the recommendations and rulings of the DSB, and to prevail, the complaining Member must establish either that those measures do not exist, or are themselves inconsistent with one of the covered agreements.

31. When the DSB adopts a ruling that a Member’s subsidy is inconsistent with Article 5 of the SCM Agreement, Article 7.8 of that Agreement provides that the Member concerned “shall take appropriate steps to remove the adverse effects or shall withdraw the subsidy.” The Appellate Body has explained that

Article 7.8 specifies the actions that the respondent Member must take when a subsidy granted or maintained by that Member is found to have resulted in adverse effects to the interests of another Member. This means that, in order to determine whether there is compliance with the DSB’s recommendations and rulings in a case involving such actionable subsidies, a panel would have to assess whether the Member concerned has taken one of the actions foreseen in Article 7.8 of the SCM Agreement.⁴¹

In short, the evaluation of the measures taken to comply centers on whether they satisfy the obligation under Article 7.8 of the SCM Agreement.

32. The EU does not appear to disagree with this understanding of the operation of Article 21.5 of the DSU and Article 7.8 of the SCM Agreement. However, it argues that Article 7.8 of the SCM Agreement must be understood as the “analogue” of Article 19.1 of the DSU, and not as the analogue of Article 21.5.⁴² The EU’s argument confuses rather than clarifies the

⁴⁰ As the Appellate Body observed in *Canada – Aircraft (21.5)*, “{p}roceedings under Article 21.5 do not concern just *any* measure of a Member of the WTO; rather, Article 21.5 proceedings are limited to those ‘measures taken to comply with the recommendations and rulings’ of the DSB.” *Canada – Aircraft (21.5) (AB)*, para. 36; (emphasis in original). *US – Softwood Lumber CVDs (21.5) (AB)*, para. 72 (“{T}he applicable time-limits are shorter than those in original proceedings, and there are limitations on the types of claims that may be raised in Article 21.5 proceedings. this confirms that the scope of Article 21.5 proceedings logically must be narrower than the scope of original dispute settlement proceedings.”)

⁴¹ *US – Upland Cotton (21.5) (AB)*, para. 235.

⁴² EU FWS, para. 43.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 13

relationship of these provisions. Article 19.1 of the DSU sets out the recommendation that a panel or the Appellate Body must make to a Member when a measure is found to be inconsistent with one of the covered agreements. Article 7.8 imposes an *obligation* on the subsidizing Member to take certain action with respect to actionable subsidies and thus sets out the content of what the Member is to do to comply.⁴³ As the Member must “take appropriate steps to remove the adverse effects or . . . withdraw the subsidy” to come into compliance,⁴⁴ Article 7.8 provides the standard for a compliance panel’s review of measures taken to comply under Article 21.5 of the DSU.

33. The EU also asserts that “Article 21.5 of the DSU applies in this case as it would in any other case under any other covered agreement.”⁴⁵ In the most basic sense, it is correct that in this proceeding as in any compliance proceeding, the focus is on whether the responding Member has complied with the recommendations and rulings of the DSB. However, the point is an academic one, because Article 7.8 of the SCM Agreement provides an obligation for compliance applicable only with regard to recommendations and rulings with respect to Article 5 of the SCM Agreement. These recommendations and rulings are the focus of the compliance analysis reviewed in the Article 21.5 proceeding.

34. This result stems from the ordinary meaning of the terms of Article 21.5 of the DSU and Article 7.8 of the SCM Agreement, in their context and in light of the object and purpose of the two agreements. The EU efforts to find a “harmonious interpretation” by seeking analogies between the DSU and the SCM Agreements⁴⁶ are accordingly misplaced. Article 21.5 and Article 7.8 are already in harmony: they instruct the Panel to examine whether compliance measures “exist” that withdraw the U.S. subsidies or constitute appropriate steps to remove the adverse effects.⁴⁷ Nothing more is needed to understand how they operate together.

⁴³ Panels have looked to the obligation in Article 7.8 to inform their recommendations under Article 19.1 of the DSU in disputes involving actionable subsidies, but the recommendation is an exercise of the panel’s authority under Article 19.1. *EC – Large Civil Aircraft (AB)*, para. 756, note 1740 (“Although there is no specific provision in the SCM Agreement requiring a panel to make a recommendation of withdrawal with respect to actionable subsidies, a panel may do so pursuant to the general rule in Article 19.1 of the DSU.”)

⁴⁴ See SCM Agreement, Article 7.9 (“In the event the Member has not taken appropriate steps to remove the adverse effects of the subsidy or withdraw the subsidy within six months from the date when the DSB adopts the panel report or the Appellate Body report, . . . the DSB shall grant authorization to the complaining Member to take countermeasures . . .”).

⁴⁵ EU FWS, para. 44.

⁴⁶ EU FWS, paras. 34-40.

⁴⁷ *US – Softwood Lumber CVDs (21.5) (AB)*, para. 69.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 14

B. The Recommendations and Rulings of the DSB, as Set Out in the Original Panel and Appellate Body Reports, Provide the Starting Point for a Panel’s Consideration of a Claim under Article 21.5 of the DSU.

35. Article 21.5 instructs a panel to evaluate “the existence or consistency with a covered agreement of measures taken to comply with the recommendations and rulings,” which, in effect, take the underlying panel findings, as modified by the Appellate Body, as a given. It is equally significant that Article 21.5 does not invite compliance panels to reopen or reconsider the DSB recommendations and rulings. Indeed, it is difficult to see how a compliance proceeding could function if the recommendations and rulings, which provide the measure of compliance, were subject to challenge.⁴⁸ Thus, the DSB recommendations and rulings, including as embodied in the panel and Appellate Body findings, are obviously important to an identification of whether a measure taken to comply exists, and also in evaluating whether such a measure is consistent with the covered agreements. They can also play an important role in evaluating whether a revised measure is inconsistent with the covered agreements. In short, a compliance panel evaluates implementation of the DSB’s recommendations and rulings and, therefore, takes as a given by the findings of the original panel and the Appellate Body.

36. The Appellate Body explained further in *Chile – Price Band System (21.5)* that:

Article 21.5 proceedings do not occur in isolation from the original proceedings, but . . . both proceedings form part of a continuum of events. The text of Article 21.5 expressly links the “measures taken to comply” with the recommendations and rulings of the DSB concerning the original measure. A panel’s examination of a measure taken to comply cannot, therefore, be undertaken in abstraction from the findings by the original panel and the Appellate Body adopted by the DSB. Such findings identify the WTO-inconsistency with respect to the original measure, and a panel’s examination of a measure taken to comply must be conducted with due cognizance of this background.⁴⁹

37. Parties may also address issues related to aspects of a measure taken to comply that differ from the measure originally found inconsistent with WTO obligations.⁵⁰ However, even in the situation in which measures taken to comply raise new issues, “{t}his does not mean that a panel operating under Article 21.5 of the DSU should not take account . . . of the reasoning of the

⁴⁸ *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is not inconsistent with WTO obligations, and that report has been adopted by the DSB. At some point, disputes must be viewed as definitely settled by the WTO dispute settlement system.”).

⁴⁹ *Chile – Price Band System (21.5) (AB)*, para. 136.

⁵⁰ *US – Softwood Lumber VI (21.5) (AB)*, para. 102 (As the redetermination is “distinct from the original determination” and provides “more explanation and reasoning” based on “more information and evidence,” then “we do not see why the Panel would be bound by the findings of the original panel.”)

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 15

original panel.”⁵¹ Thus, the recommendations and rulings of the DSB will always provide the starting point for a Panel’s analysis under Article 21.5.

38. The limitations on the scope of an Article 21.5 proceeding also act to preclude consideration of several types of issues. In particular, Members generally may not make claims in compliance proceedings that they could have pursued during the original proceedings, but opted not to.⁵² The reason for this principle is obvious: it would undermine the rules and procedures agreed by Members in the DSU if a Member could short-circuit original proceedings by choosing not to pursue certain claims during original proceedings, and then raising them for the first time under the expedited timetable of a compliance proceeding. Such a tactic would also deprive responding Members of their reasonable period of time to comply with any recommendations and rulings of the DSU.

39. In addition, the DSU does not allow complaining Members to use compliance proceedings to re-raise claims and arguments that were rejected during the original proceedings. As the Appellate Body stated in *US – Upland Cotton (21.5) (AB)*:

We agree with the United States that the scope of claims that may be raised in an Article 21.5 proceeding is not unbounded. As the Appellate Body found in *EC – Bed Linen (Article 21.5 – India)*, a complainant who had failed to make out a *prima facie* case in the original proceedings regarding an element of the measure that remained unchanged since the original proceedings may not re-litigate the same claim with respect to the unchanged element of the measure in the Article 21.5 proceedings. Similarly, a complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be *WTO-consistent* in the original proceedings. Because adopted panel and Appellate Body reports must be accepted by the parties to a dispute, allowing a party in an Article 21.5 proceeding to re-argue a claim that has been decided in adopted reports would indeed provide an unfair “second chance” to that party.⁵³

Thus, the limits of Article 21.5 proceedings operate to preclude complaining Members from re-arguing issues settled in the original proceedings. Otherwise, complaining Members would have an unfair “second chance” with respect to any claims that they lose in original proceedings.

⁵¹ *US – Softwood Lumber VI (21.5) (AB)*, para. 103.

⁵² *US – Upland Cotton (21.5) (AB)*, para. 211 (“A complaining Member ordinarily would not be allowed to raise claims in an Article 21.5 proceeding that it could have pursued in the original proceedings, but did not.”). The exception to this general rule is that WTO Members may make a claim against “a new and different measures” in compliance proceedings, even if the measure “incorporates components from the original measure that are unchanged, but are not separable from other aspects of the measure taken to comply.” *US – Zeroing (21.5 – EC) (AB)*, para. 432.

⁵³ *US – Upland Cotton (21.5) (AB)*, para. 210 (emphasis in original).

C. The Parties to a Compliance Proceeding Bear the Same Burden of Proof as in an Original Proceeding.

1. *The burden of proof in a compliance proceeding involving Article 7.8 of the SCM Agreement*

40. In a proceeding under Article 21.5 of the DSU, the complaining Member bears the burden of proof. It must make a *prima facie* case, by making arguments and adducing evidence sufficient to justify a presumption that its claim is correct. It is up to the responding party to make arguments and adduce evidence to counter that presumption.⁵⁴ However, if the complaining party fails to meet its burden of proof in the initial step, the panel must decide in favor of the responding party. At no stage in the process may the panel make a *prima facie* case for one of the parties.⁵⁵

41. Therefore, in a compliance dispute involving Article 7.8 of the SCM Agreement, the complaining Member bears the burden of showing both that the responding Member did not withdraw the subsidy and that it did not take appropriate steps to remove the adverse effects. The EU asserts in its first written submission that to do this, the complaining Member must “demonstrate present adverse effects during a period following the six month implementation period” and “a genuine and substantial relationship of cause and effect” during that time.⁵⁶ In effect, the EU is asserting that a Member challenging compliance under Article 7.8 must make its entire case again. As this is the only compliance argument that the EU advances, it will fail to meet its burden of proof if does not do so. The United States notes that the DSU and the SCM Agreement do not constrain a Member to adopt this approach. However, as the EU does not advance any other arguments, the question of whether it is the only way to demonstrate noncompliance under Article 7.8 is not before the Panel, and need not be resolved to fully address the EU’s efforts to make a *prima facie* case.

42. The EU also asserts that the responding Member’s cooperation with an Annex V procedure or a question put by a panel pursuant to Article 13 of the DSU affect the complaining Member’s burden of proof. In particular, it contends that in the event of non-cooperation, the

⁵⁴ *US – Shirts and Blouses (AB)*, p. 13 (“the burden of proof rests upon the party, whether complaining or defending, who asserts the affirmative of a particular claim or defence. If that party adduces evidence sufficient to raise a presumption that what is claimed is true, the burden then shifts to the other party, who will fail unless it adduces sufficient evidence to rebut the presumption”); *EC – Hormones (AB)*, (“The initial burden lies on the complaining party, which must establish a *prima facie* case of inconsistency with a particular provision of the SPS Agreement on the part of the defending party, or more precisely, of its SPS measure or measures complained about. When that *prima facie* case is made, the burden of proof moves to the defending party, which must in turn counter or refute the claimed inconsistency.”).

⁵⁵ *Japan – Apples (AB)*, para. 129 (“Article 13 of the DSU and Article 11.2 of the *SPS Agreement* suggest that panels have a significant investigative authority. However, this authority cannot be used by a panel to rule in favour of a complaining party which has not established a *prima facie* case of inconsistency based on the specific legal claims asserted by it.”).

⁵⁶ EU FWS, para. 49.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 17

complaining Member may base its case on the information available, and seek appropriate inferences from the Panel.⁵⁷ The United States does not see the relevance of this observation, as it cooperated fully with the Panel’s information request. However, there is no question that a panel may make appropriate inferences based on the information before it, and that a Member making a claim in dispute settlement by necessity uses the information available to it.

43. However, the EU errs in categorizing allegations of noncooperation with information requests as bearing on the EU’s burden of proof. The Appellate Body’s reasoning in *Canada – Aircraft* is particularly compelling on this point:

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 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. In contrast, the burden of proof is a procedural concept which speaks to the fair and orderly management and disposition of a dispute. The burden of proof is distinct from, and is not to be confused with, the drawing of inferences from facts.⁵⁸

The Appellate Body observed further that a party’s refusal to provide information sought might be one fact that a panel considered in drawing inferences, which could suggest that the information withheld was prejudicial to the party’s arguments.⁵⁹ Other relevant facts might include whether the information existed, whether the information was pertinent, and whether the panel accepted the party’s justification for not providing the information.⁶⁰

44. Thus, the facts surrounding a party’s provision, or non-provision, of information to a panel do not reduce the other party’s burden of proof. They merely add an additional set of facts that may (or may not) prove relevant in meeting that burden. And, any conclusion as to the significance of the fact that a party did not provide requested information depends on other facts, including the reasons behind the party’s actions.

⁵⁷ EU FWS, para. 33.

⁵⁸ *Canada – Aircraft (AB)*, para. 198 (emphasis in original).

⁵⁹ *Canada – Aircraft (AB)*, paras. 203 and 205.

⁶⁰ *Canada – Aircraft (AB)*, para. 199.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 18

2. *There is no justification to lower the EU’s burden of proof by accepting the demonstrably incorrect information it advances as “the best available evidence.”*

45. The EU fails either to support its charges of U.S. “failure to cooperate” and “refusal” to provide information, or to justify the use of demonstrably wrong information as the “best evidence available” in light of these alleged actions.⁶¹ As this incorrect information is at the heart of the EU claims, that failure is fatal to the EU’s efforts to make a *prima facie* case, because faulty evidence cannot create a presumption in favor of the party citing that evidence.

46. To begin, the EU has not demonstrated a failure to cooperate or refusal to respond to a question. The most it has shown is that certain questions posed by the Panel sought information that did not exist or that was impossible to identify, gather, and prepare in the time initially allotted. None of these would justify a finding of failure to cooperate or refusal to cooperate. In fact, it is a predictable consequence of the EU’s decision to make an early deadline for its first written submission its paramount concern.

47. Moreover, the EU’s analysis fails entirely to take account of the factual situations surrounding the Panel’s questions and the U.S. responses, in particular, the reasons the United States found itself unable to meet some of the Panel’s due dates for some of the information. Under the Appellate Body’s reasoning in *Canada – Aircraft (AB)*, a panel cannot take account of an alleged failure to cooperate without considering such facts.⁶² As the party requesting the Panel to take inferences based on alleged U.S. failure to cooperate, the EU has accordingly failed to meet its burden of proof that the proposed inferences are warranted.

48. Finally, although the EU frames its allegations as the “best evidence available,” they are in fact punitive because they ask the Panel to accept facially inaccurate data as true solely because of alleged (and nonexistent) U.S. failures to cooperate. For example, the original Panel found that the EU methodology for valuing payments, facilities, equipment, and employees under NASA contracts and SAAs with Boeing resulted in a figure *four times larger* than the *largest* figure supported by actual data.⁶³ Yet in its first written submission, the EU once again advances the same methodology, as “best evidence” of the value of alleged subsidies.⁶⁴ It is difficult to see how these actions are consistent with the EU’s responsibilities as a party to this proceeding and a Member of the WTO.

⁶¹ *E.g.*, EU FWS, paras. 179

⁶² *Canada – Aircraft (AB)*, para. 198.

⁶³ *Compare US – Large Civil Aircraft (Panel)*, para. 7.1059 (“The European Communities estimates that NASA provided \$10.4 billion in subsidies to Boeing over the period 1989-2006”) *with ibid.*, para. 7.1110 (“the amount of the subsidy to Boeing’s LCA division is \$2.6 billion over the period 1989-2006”).

⁶⁴ EU FWS, para. 179.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 19

49. In its analysis of each alleged subsidy, the United States will address each of the EU allegations of “failure to cooperate” and the like in turn, and demonstrate that the EU’s proposed alternative to real evidence is inaccurate and unwarranted.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 20

III. ALLEGED SUBSIDIES

A. Analytical Framework

1. The analysis of subsidy allegations begins with an evaluation of whether the measure, properly characterized, confers a financial contribution within the meaning of Article 1.1(a)(1) of the SCM Agreement.

50. Under Article 1.1 of the SCM Agreement, a subsidy exists if “there is a financial contribution by a government” and “a benefit is thereby conferred.” Article 14 of the SCM Agreement, which provides context for interpreting Article 1,⁶⁵ indicates that the specific method for determining the existence of a benefit will differ depending on the financial contribution in question. Therefore, a proper identification of the financial contribution is a critical first step in any evaluation of a claim of WTO-inconsistent subsidies.

51. The Appellate Body has found that, as a general matter,

{i}n 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 {measure} and, thereby, properly determining the discipline(s) to which it is subject under the covered agreements.⁶⁶

With regard to an alleged subsidy, “{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.”⁶⁷

52. In the recent appeal of *Canada – Renewable Energy*, the Appellate Body elaborated on these principles for assessing subsidization:

When determining the proper legal characterization of a measure under Article 1.1(a)(1) of the SCM Agreement, a panel must assess whether the measure may fall within any of the types of financial contributions set out in that provision. In doing so, a panel should scrutinize the measure both as to its design and operation and identify its principal characteristics. Having done so, the transaction may naturally fit into one of the types of financial contributions listed in Article

⁶⁵ *Canada – Aircraft (AB)*, para. 155 (“Although the opening words of Article 14 state that the guidelines it establishes apply ‘{f}or the purposes of Part V’ of the SCM Agreement, which relates to ‘countervailing measures’, our view is that Article 14, nonetheless, constitutes relevant context for the interpretation of ‘benefit’ in Article 1.1(b).”).

⁶⁶ *China – Auto Parts (AB)*, para. 171 (emphasis in original).

⁶⁷ *US – Softwood Lumber CVDs (AB)*, para. 52.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 21

1.1(a)(1). However, transactions may be complex and multifaceted. This may mean that different aspects of the same transaction may fall under different types of financial contribution. It may also be the case that the characterization exercise does not permit the identification of a single category of financial contribution and, in that situation, as described in the *US – Large Civil Aircraft (2nd complaint)* Appellate Body report, a transaction may fall under more than one type of financial contribution. We note, however, that the fact that a transaction may fall under more than one type of financial contribution does not mean that the types of financial contributions set out in Article 1.1(a)(1) are the same or that the distinct legal concepts set out in this provision would become redundant.⁶⁸

When applying this analysis, the Appellate Body found that transactions properly characterized as purchases of goods by the panel in that dispute were not also properly characterized as direct transfers of funds or potential direct transfers of funds for purposes of Article 1.1(a)(1)(i).⁶⁹

53. The characterization of a transaction under municipal law is a factor that panels may properly consider in evaluating the proper characterization under Article 1.1(a)(1), but is not dispositive.⁷⁰ Other appropriate factors may include: whether the government has paid consideration in exchange for a good,⁷¹ whether the government takes possession and ownership of a good in the transaction,⁷² whether the government is essentially investing in a particular project,⁷³ whether both sides to a transaction contribute resources to achieve a joint outcome,⁷⁴ and precisely what the government provided to the recipient.⁷⁵ As this list indicates, the analysis depends greatly on the facts of the case.

2. A benefit exists only if the government provides the financial contribution on terms better than the recipient could obtain in a market transaction.

54. Based on the meaning of the term “benefit” and the context provided by Article 14 of the SCM Agreement, the Appellate Body found in *Canada – Aircraft* that a benefit is conferred “if the recipient has received a ‘financial contribution’ on terms more favourable than those

⁶⁸ *Canada – Renewable Energy (AB)*, para. 5.120.

⁶⁹ *Canada – Renewable Energy (AB)*, para. 5.131.

⁷⁰ *Canada – Renewable Energy (AB)*, para. 5.127; *US – Softwood Lumber CVDs (AB)*, para. 56.

⁷¹ E.g., *Canada – Renewable Energy (AB)*, para. 131.

⁷² E.g., *Canada – Renewable Energy (AB)*, para. 127.

⁷³ *US – Large Civil Aircraft (AB)*, para. 622.

⁷⁴ *US – Large Civil Aircraft (AB)*, para. 623.

⁷⁵ *EC – Large Civil Aircraft (AB)*, para. 965; *US – Softwood Lumber CVDs (AB)*, paras. 61-69.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 22

available to the recipient in the market.”⁷⁶ In this inquiry, “different characterizations of a measure may lead to different *methods* for determining whether a benefit has been conferred.”⁷⁷

55. In this regard, the Appellate Body has found Article 14 “constitutes relevant context for the interpretation of “benefit” in Article 1.1(b).”⁷⁸ The provisions most relevant to this dispute appear in paragraphs (a) and (d):

- (a) government provision of equity capital shall not be considered as conferring a benefit, unless the investment decision can be regarded as inconsistent with the usual investment practice (including for the provision of risk capital) of private investors in the territory of that Member;

* * * * *

- (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 or provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale).

56. In implementing these guidelines, panels normally look to commercial practice for comparison with the alleged subsidy, such as the interest rates offered on a commercial basis by a market operator⁷⁹ or the price charged by private suppliers for a good.⁸⁰ The wording in subparagraph (d) signals an important difference – that when a government purchase is involved, the analysis focuses on whether the government remunerated the seller more than was adequate. Thus, the focus is not on whether the government bought something that a commercial actor would buy, but on the price that the government paid. In many instances, governments buy things that private entities do not. Scientific research for broad dissemination of information would certainly be on that list, as would certain military weapons systems. The fact that the government bought something that a private actor would not have wanted, or decided not to purchase something a private buyer would have wanted, is of no consequence if the remuneration is adequate. The Appellate Body has emphasized that the analysis described in subparagraph (d) must also occur in a properly defined market.⁸¹

⁷⁶ *Canada – Aircraft (AB)*, para. 158.

⁷⁷ *Canada – Renewable Energy (AB)*, para. 130.

⁷⁸ *Canada – Aircraft (AB)*, para. 155.

⁷⁹ *Korea – Commercial Vessels*, para. 7.155.

⁸⁰ *US – Softwood Lumber CVDs (AB)*, para. 90.

⁸¹ *Canada – Renewable Energy (AB)*, paras. 5.226-5.227.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 23

57. In addition, panels may not base their analysis of benefit “only on their own intuition of what rational economic actors would do. . . . {A} panel should test its intuitions empirically, especially where the parties have submitted evidence as to how market actors behave.”⁸² The proper question is “what a market outcome would be,” and “the fact that the government sets prices does not in itself establish the existence of a benefit.”⁸³ In such circumstances, “such benchmark may also be found in price-discovery mechanisms such as competitive bidding or negotiated prices, which ensure that the price paid by the government is the lowest possible price offered by a willing supply contract.”⁸⁴

58. Finally, as this discussion makes clear, the value of any “benefit” for purposes of Article 1.1(b) is the difference between what the recipient received from the government and a “benchmark” consisting of what the recipient would have paid in a commercial transaction. As the Appellate Body has explained:

That benchmark entails a consideration of what a market participant would have been able to secure on the market at that time. The market benchmark is predicated upon a projection as to the anticipated flow of returns that are expected to accrue as a result of the financial contribution. Consequently, the determination of benefit under Article 1.1(b) of the SCM Agreement is an *ex ante* analysis that does not depend on how the particular financial contribution actually performed after it was granted.⁸⁵

The Appellate Body in that instance was addressing a financial instrument with set terms requiring repayment. Evaluating the anticipated flow of return from a research effort is vastly more speculative because the parties typically do not know at the outset what the results will be. Moreover, to the extent that DoD-sponsored research is successful, the resulting technology is likely to have military utility that would necessitate export controls, thereby leaving it little (if any) civil utility.

59. The EU asserts at several points that the benefit from NASA, FAA, and DoD contracts and agreements is “a multiple of the financial contributions due to the nature of the R&D and the resulting technology and lessons learned.”⁸⁶ This statement is erroneous on multiple levels. As a legal matter, it impermissibly takes an *ex post* approach to valuation by looking at what actually resulted, when at the outset, the parties had no idea of whether any of that would occur. As a factual matter, it simply assumes, without evidence, that the generation of technology and knowledge in the course of a business relationship (“lessons learned”) is the effect of some non-commercial benefit, rather than the natural, commercial result of any such transaction. And,

⁸² *EC – Large Civil Aircraft (AB)*, para. 643.

⁸³ *Canada – Renewable Energy (AB)*, para. 5.228.

⁸⁴ *Canada – Renewable Energy (AB)*, para. 5.228.

⁸⁵ *EC – Large Civil Aircraft (AB)*, para. 706.

⁸⁶ EU FWS, para.56, figure 1, note 86; para. 191; para. 225; and para. 385.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 24

finally, it is rearguing a point already settled by the original panel, which found that the actual financial contribution was *less* than the face value, because these transactions obtained something of use to NASA and, therefore, were not grants.⁸⁷ The EU cites a panel finding quoted by the Appellate Body that research spending may have an effect beyond the cash value of the subsidies⁸⁸ and asserts that this means that the benefit “can be valued as a multiple of the financial contribution.” The effect of any research spending found to be a subsidy certainly needs to be evaluated based on, among other things, its nature. That, however, is an issue for the analysis of adverse effects, and does not go to the valuation of the benefit, as the Appellate Body has made clear.⁸⁹

B. The United States Renews and Augments its Request for Preliminary Rulings that a Number of Claims Raised by the EU are Not Properly within the Terms of Reference of this Panel.

60. As mentioned above, the United States submitted the U.S. PRR on November 23, 2012. The EU responded to the U.S. PRR on November 23, 2012, and the United States replied on December 3, 2012 (U.S. PR Reply).⁹⁰ More than four months later, on March 28, 2013, the EU filed its first written submission, which declined to discuss the issues raised in the U.S. PRR, stating that it would be “premature and inefficient” to do so.⁹¹ However, the Panel disagreed and “strongly encourage {d}” the EU to address “the logically prior questions of scope admissibility and jurisdiction.”⁹² In response, the EU submitted a Supplemental Submission in response to the U.S. PRR on May 13, 2013.⁹³

61. Although the EU has had several opportunities to respond, and despite the Panel’s indication that “{s}cope and admissibility . . . are hardly matters to be resolved *after* issues of substance are dealt with,”⁹⁴ the EU has put forward no new information or arguments that respond to the U.S. PRR. In light of the Panel’s preference for addressing scope-related issues early in the proceeding, the United States respectfully renews its request that the Panel make the findings requested in the U.S. PRR. Doing so would significantly alleviate the burden on the parties and the Panel, and would allow them and the Panel to focus their attention in the second round of submissions on issues properly within the Panel’s terms of reference. In the remainder

⁸⁷ *US – Large Civil Aircraft (Panel)*, para. 7.1100.

⁸⁸ *US – Large Civil Aircraft (AB)*, para. 945 (“the Panel found that, by their nature, the aeronautics RD subsidies ‘multiply the benefit from a given expenditure.’ In this regard, the Panel rejected the proposition that ‘the effects of the aeronautics R&D subsidies can essentially be reduced to their cash value.’”).

⁸⁹ *US – Large Civil Aircraft (AB)*, para. 945.

⁹⁰ EU PR Response; US PR Reply.

⁹¹ EU FWS, para. 55.

⁹² Communication from the Panel (May 6, 2013).

⁹³ EU Supplemental Submission.

⁹⁴ Communication from the Panel (May 6, 2013).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 25

of this section, the United States explains why the EU arguments in response to the U.S. PRR support, rather than undermine, our requests.

1. DoD agreements under “new” program elements

62. The U.S. PRR requested a preliminary ruling that the EU’s claims against DoD agreements under “new” PEs are precluded, because they correspond to DoD programs that existed at the time of the EU panel request in the original dispute, or they continue work under programs that existed at that time, but which the EU did not challenge.⁹⁵ The EU does not contest the legal principle that a Member should not be allowed to raise claims in compliance proceedings that it could have raise in original proceedings, but did not. The EU also does not assert that it could *not* have brought challenges under these PEs.

63. Rather, the EU makes the following points:

- Aviation Survivability (PE 0603216N) and KC-10S (PE 0401219F): the EU has dropped its claims.⁹⁶
- Multi-Mission Maritime Aircraft (P-8A) (PE 0605500N): the EU concedes that it could have challenged this program at the time of its original panel request,⁹⁷ but it notes that the program had not completed its “critical design review” until July 2007.⁹⁸ However, the EU fails to explain how the timing of the critical design review is relevant to the question of whether the EU could have challenged the program when it submitted its panel request in the original proceeding. Rather, the relevant date is 2004, when the Navy awarded the contract to Boeing.⁹⁹ Because 2004 was several years before the EU panel request in the original proceeding, the EU should have included P-8A in the original proceeding if it considered that P-8A is relevant to this dispute.

⁹⁵ The “new” PEs are Airborne Warning and Control System (AWACS) (PE 0207417F); Aviation Survivability (PE 0603216N); KC-10S (PE 0401219F); Long Range Strike Bomber (PE 0604015F); Manufacturing Technology/Industrial Preparedness Program: Defense Logistics Agency (PE 0708011S); Materials and Biological Technology (PE 0602715E); Multi-Mission Maritime Aircraft (P-8A) (PE 0605500N); KC-46, Next Generation Aerial Refueling Aircraft (PE 0605221F) (continues work that was previously conducted under “KC-135 Tanker Replacement,” PE 0401221F); and Technology Transfer (PE 0604317F) (continues work previously under “Technology Link,” PE 0603942D8Z). The first seven “new” PEs existed at the time of the EU’s original panel request. The latter two continue work that was previously conducted under a different PE number, which was in existence at the time of the EU’s original panel request, but was not challenged therein. *See* US PRR, paras. 13-14. Note that these PEs are “new” in the sense that they are new to this compliance dispute. However, as explained above, they all pre-date the original dispute, and in that sense are not “new.”

⁹⁶ EU Supplemental Submission, para. 18.

⁹⁷ EU Supplemental Submission, para. 20.

⁹⁸ EU Supplemental Submission, para. 20.

⁹⁹ Section III.F.3.a.iii discusses this program element in more detail.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 26

- Program elements that the EU excluded from its claims in the original proceeding.¹⁰⁰ the EU argues that its current claims are limited to aspects of these programs that did not exist until after 2011.¹⁰¹ However, this does not indicate that the EU could not have challenged the measures during the original proceeding, or that there is any legally relevant discontinuity between the programs as they existed at the time of the original EU panel request and as they exist today.

Therefore, the EU's Supplemental Submission only confirms that the EU could have challenged DoD contracts and agreements under the "new" program elements during the original proceeding. In fact, the aspects of these program elements that it now tries to characterize as new all flow naturally from what was known about the program elements at the time of the EU's original panel request. To take one example, the "KC-135 Tanker Replacement" program element (0401221F), which was active in 2004, obviously treads the same ground as work funded through the KC-46 Next Generation Aerial Refueling Aircraft (PE 0605221F).¹⁰² Therefore, the EU's failure to challenge these program elements in the original proceedings means it is precluded from challenging them in this compliance proceeding.¹⁰³

2. DoD procurement contracts under "old" program elements

64. In the original proceeding, the EU unsuccessfully challenged DoD procurement contracts under the 23 original (*i.e.*, "old") PE numbers.¹⁰⁴ The EU appealed this panel finding but then asked the Appellate Body not to complete the analysis.¹⁰⁵ Thus, the absence of DSB-adopted findings on procurement contracts is due to the EU's own actions. The EU does not contest these facts, nor does it contest the legal principle that a complaining Member generally should not be able to raise claims in compliance proceedings that it could have pursued in the original proceedings, but opted not to.

65. Rather, the EU asks the Panel to make an exception to this general rule in cases where complainants decide for themselves that the Appellate Body would be unable to complete the

¹⁰⁰ Airborne Warning and Control System (AWACS) (PE 0207417F); Long Range Strike Bomber (PE 0604015F); Manufacturing Technology/Industrial Preparedness Program: Defense Logistics Agency (PE 0708011S); Materials and Biological Technology (PE 0602715E); and KC-46, Next Generation Aerial Refueling Aircraft (PE 0605221F) (continues work that was previously conducted under "KC-135 Tanker Replacement," PE 0401221F).

¹⁰¹ EU Supplemental Submission, para. 20.

¹⁰² US PRR, section I.B.

¹⁰³ *US – Upland Cotton (21.5) (AB)*, para. 211. *See also US – Zeroing (21.5 – EC) (AB)*, para. 432 (the finding in *US – Upland Cotton (21.5)* "excludes, in principle (ordinarily) from Article 21.5 proceedings new claims that could have been pursued in the original proceedings, but not new claims against a measure taken to comply – that is, in principle, a new and different measure.").

¹⁰⁴ *US – Large Civil Aircraft (Panel)*, paras. 7.1113, 7.1171..

¹⁰⁵ *See US – Large Civil Aircraft (AB)*, para. 620 & note 1298

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 27

analysis with respect to a particular claim. Thus, in this case, the EU privately considered that the Appellate Body could not have completed the analysis even if the EU pursued the claim, so it requested the Appellate Body not to do so, and instead asks the compliance panel to take up the matter.¹⁰⁶

66. If the EU’s argument is correct, then complaining Members have a mechanism to obtain a “second chance” at the issues in dispute. If they are displeased with the outcome of a panel finding in an original dispute, then they can appeal the finding but ask the Appellate Body not to complete the analysis. By asking the Appellate Body not to gauge whether there are sufficient factual findings or uncontested facts to complete the analysis, the complaining party would avoid an evaluation of whether it had brought forward sufficient evidence and arguments to make out its case. And then, if the appeal is successful, the complaining Member can have a “second chance” at making its case in a compliance proceeding. This outcome is contrary to the limited scope of DSU Article 21.5. It would also impose an unfair burden on the responding party, which, to avoid having the issue addressed in an Article 21.5 proceeding, might then need to seek findings itself from the Appellate Body that the factual findings and uncontested facts on the record are *not* sufficient to support the complaining party’s case. There is no basis in the DSU to support reversing the normal rules of burden of proof in this manner as a result of a complaining party’s litigation tactics.

3. *Boeing’s access to DoD equipment and employees.*

67. As the original panel found, the EU panel request in the original dispute excluded access to DoD equipment and employees.¹⁰⁷ In the U.S. PR Reply, the United States discussed this original panel finding in detail, and it also questioned the EU claim that DoD funding and DoD’s provision of equipment and employees to Boeing has “massively increased” since 2006.¹⁰⁸ The EU does not attempt to defend this assertion in its Supplemental Submission, and therefore the United States considers that it has abandoned its claim that provision of DoD equipment and employees is within the this Panel’s terms of reference.¹⁰⁹

68. In a four-sentence comment on this issue, the EU asserts generically that “nothing prevents a complaining Member from adducing new facts and evidence” in compliance proceedings.¹¹⁰ However, the EU fails to point to any specific facts which, in its view, would

¹⁰⁶ See EU Supplemental Submission, para. 15 (“The European Union has already explained why it considered that completion of the analysis might be possible for DOD assistance instruments, but not procurement contracts . . .”).

¹⁰⁷ *US – Large Civil Aircraft (Panel)*, paras. 7.1120-7.1122; see also US PRR, paras. 11-12; US PR Reply, paras. 36-41.

¹⁰⁸ See U.S. PR Reply, para. 40 (emphasis removed).

¹⁰⁹ The EU included an argument that DoD provision of equipment and employees was a financial contribution. EU FWS, para. 369. However, as it did not defend that assertion two weeks later in its Supplemental Submission, it apparently had a change of heart.

¹¹⁰ EU Supplemental Submission, para. 17.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 28

warrant derogating from the general principle that a complaining Member may not raise claims in compliance proceedings that it could have raised in the original proceeding, but did not. Accordingly, the EU has failed to establish any basis to challenge the alleged provision of DoD equipment and employees in the context of the compliance dispute.

4. *South Carolina Measures*

69. In sections III.K.3.a and III.K.4.a, the United States provides a detailed argument demonstrating why the South Carolina measures are not measures taken to comply, in particular the absence of any close nexus between the South Carolina measures and the measures covered by the DSB's recommendations and rulings.

70. The United States explained in the U.S. PRR and the U.S. PR Reply that the South Carolina measures referenced in the EU panel request had no close nexus with the U.S. declared measures taken to comply or the DSB's recommendations and rulings in this dispute.¹¹¹ In its first written submission and its Supplemental Submission, the EU provided no new information or arguments related to its claims that the South Carolina measures are within the terms of reference.¹¹²

71. For all these reasons, the United States respectfully reiterates its request for a preliminary ruling that the South Carolina measures are outside the Panel's terms of reference.

5. *FAA CLEEN*

72. The United States explained in the U.S. PRR and the U.S. PR Reply that the FAA CLEEN-related measures referenced in the EU panel request are not measures taken to comply, including that they had no close nexus with the U.S. declared measures taken to comply or the DSB's recommendations and rulings in this dispute.¹¹³ In its first written submission and its Supplemental Submission, the EU provided no new information or arguments related to its claims that the FAA measures are within the Panel's terms of reference.¹¹⁴

73. In section III.G.1, the United States demonstrates the absence of any close nexus between FAA CLEEN, the measures covered by the DSB's recommendations and rulings, and the U.S. declared measures taken to comply. Indeed, the FAA is an independent federal agency, and the EU has failed to establish that the FAA is undermining U.S. compliance obligations flowing

¹¹¹ *US PRR*, paras. 36-44; *US PR Reply*, paras. 65-71.

¹¹² *EU FWS*, paras. 734-736 (presenting a three-paragraph reprisal of the EU scope arguments from the *EU PR Response*); *EU Supplemental Submission*, para. 33 (again reprising the same arguments). To the extent that the *EU Supplemental Submission* clarifies any of the EU's previous arguments in any relevant way, the United States addresses these points below in sections III.K.3.a and III.K.4.a.

¹¹³ *US PRR*, paras. 19-22; *US PR Reply*, paras. 46-64.

¹¹⁴ *See EU FWS*, paras. 229-232 (reprising arguments in the *EU PR Response*); *EU Supplemental Submission*, para. 26.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 29

from the original dispute. Therefore, the United States respectfully reiterates its request for a preliminary ruling that FAA CLEEN is outside the scope of this dispute.

6. *Washington State JCATI and Leasehold Excise Tax Credit*

74. As discussed in section III.I.3.b, the EU has failed to establish that a close nexus exists between the activities of Washington State’s Joint Center for Aerospace Technology Innovation (“JCATI”), the recommendations and rulings of the DSB, and the U.S. declared measures taken to comply. Indeed, by law, the JCATI cannot even make payments to private companies like Boeing. It may only fund public universities in Washington State. The EU’s challenge to the JCATI program is simply another misplaced effort by the EU to halt U.S. educational and vocational funding.¹¹⁵ Furthermore, JCATI had not even committed any funds to private universities as of the date of the panel establishment.¹¹⁶

75. In addition, the EU has failed to establish that a close nexus exists between the Washington State leasehold excise tax credit, including as allegedly conferred through the Dreamlifter Operations Center, the recommendations and rulings of the DSB, and the U.S. declared measures taken to comply.¹¹⁷ In any event, as the United States already explained in response to the Panel’s Article 13 request, Boeing has received zero funds under the Washington State leasehold excise tax credit program, and the EU does not present any evidence to the contrary other than its own speculation and unsupported estimates.¹¹⁸

76. Consequently, the United States respectfully requests preliminary rulings that the JCATI, the Washington State leasehold excise tax credit, and the Dreamlifter Operations Center are outside the terms of reference of this Panel.

7. *Washington State measures for which there was no DSB-adopted finding*

77. The EU unsuccessfully challenged several Washington State measures in the original dispute under SCM Articles 5 and 6: (i) the Washington State B&O tax credit for preproduction development; (ii) Washington State B&O tax credit for property taxes; and (iii) the sales and use tax exemptions for computer hardware, software and peripherals. These are all measures that the original panel found not to cause serious prejudice, and the Appellate Body did not disturb that conclusion. With respect to a fourth measure, the City of Everett B&O tax rate reduction, as discussed in section III.I.2.d, the Appellate Body had sufficient facts before it to complete the analysis, but did not find that it caused adverse effects to the EU large civil aircraft industry.¹¹⁹

¹¹⁵ Other examples of this effort are the EU’s failed attempt to challenge the workforce training program in connection with Project Olympus during the original dispute, and its attempt to challenge the readySC workforce training program in South Carolina in this compliance dispute.

¹¹⁶ Section III.I.3.a discusses this in greater detail.

¹¹⁷ Section III.I.3.a discusses this issue in greater detail.

¹¹⁸ See Communication from the United States to the Panel (Mar. 22, 2013); EU FWS, paras. 485-486.

¹¹⁹ Section III.I.2 discusses this issue in greater detail.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 30

Therefore, the United States requests a preliminary ruling that these measures are outside the terms of reference of this Panel.

8. *Washington State measures under Article 3.1(a) and 3.2 of the SCM Agreement*

78. The United States and the EU agree that in the original dispute the panel rejected EU claims under Article 3.1(a) and 3.2 of the SCM Agreement with respect to the following Washington State measures: the State B&O tax rate reduction for manufacturers of commercial aircraft, the State B&O tax credits for preproduction/aerospace product development and property taxes, and the State sales and use tax exemptions for computer hardware, peripherals, and software. That is, the panel did not conclude that these were prohibited export-contingent subsidies under Article 3.1(a) and 3.2 of the SCM Agreement.¹²⁰ Consequently, the United States requested a preliminary ruling that these measures are outside the terms of reference of this Panel.¹²¹

79. In response, the EU states generically that “{t}here is no *per se* bar to the fact or evidence that a complaining Member may place before a compliance panel.”¹²² Be that as it may, it is irrelevant to the point that a complaining party cannot, in Article 21.5 proceedings, revive previously rejected claims. Rather, the EU is contesting the finality of the DSB’s recommendations and rulings by seeking for an unfair “second chance” to make these claims.

80. Accordingly, the United States respectfully repeats its request for a preliminary ruling that the EU’s claims under Articles 3.1(a) and 3.2 of the SCM Agreement against the State B&O tax rate reduction for manufacturers of commercial aircraft, the State B&O tax credits for preproduction/aerospace product development and property taxes, and the State sales and use tax exemptions for computer hardware, peripherals, and software, are outside the terms of reference of this Panel.

9. *Prohibited subsidy claims against measures that were cited in the EU’s original panel request*

81. In the original proceedings, the EU did not make any claims under Articles 3.1(b) and 3.2 of the SCM Agreement. Furthermore, the EU has not cited any new evidence indicating that the structure, design, and operation of the measures covered by the DSB recommendations and rulings have changed in any relevant way. Therefore, the EU claims against measures cited in its original panel request under these provisions are not permitted in this compliance proceeding.¹²³

¹²⁰ *US – Large Civil Aircraft (Panel)*, para. 4.358.

¹²¹ *See* US PRR, para. 7.

¹²² EU Supplemental Submission, para. 5.

¹²³ *See* US PRR, para. 16.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 31

82. The situation is somewhat different with regard to prohibited export-contingent subsidy claims under Articles 3.1(a) and 3.2 of the SCM Agreement. The EU made a smaller number of export subsidy claims, but did not make such claims with respect to any of the NASA original measures, the DOD original measures, the State of Kansas and City of Wichita original measures, or two of the Washington original measures – the City of Everett B&O tax reductions and the State B&O tax credits for leasehold excise taxes on covered buildings and land.¹²⁴ Therefore, the EU is precluded from making these arguments now.¹²⁵

83. The EU Supplemental Submission fails to provide any basis to draw a different conclusion. Rather, the Supplemental Submission states that “the facts and evidence have *changed significantly*” since the original dispute.¹²⁶ However, the EU does not point to any specific facts or changes that might warrant allowing the EU to make claims in the compliance proceedings that it could have raised in the original proceeding, but opted not to.

84. The EU should not be permitted to short-circuit original proceedings with respect to its claims under Articles 3.1(a), 3.1(b), and 3.2 SCM against unchanged measures listed in the original panel request. Accordingly, the United States respectfully reiterates its request that the Panel issue a preliminary ruling indicating that these claims are not properly within the terms of reference of this compliance proceeding.

10. The EU’s claims regarding Article III:4 of GATT 1994 are outside the Panel’s terms of reference.

85. In five short paragraphs applying Article III:4 of the GATT 1994 to the facts of this proceeding, the EU asks the Panel to make findings with regard to a claim that it could have pursued in the original proceeding, but did not. In the original proceeding, the EU actually made claims under Article III:4 of GATT 1994 with regard to all of the measures listed in its panel request,¹²⁷ but later abandoned those claims. Therefore, it clearly had the opportunity to pursue those claims, but chose not to. As noted above, a party may not invoke DSU Article 21.5 to pursue a claim that it could have, but did not, pursue in the original proceeding.

¹²⁴ *United States – Large Civil Aircraft (Panel)*, para. 3.1. As explained in section III.B.8, the EU did make export-contingent subsidy claims with respect to the other three original Washington measures – the State B&O tax rate reduction for manufacturers of commercial aircraft, the State B&O tax credits for preproduction/aerospace product development and property taxes, and the State sales and use tax exemptions for computer hardware, peripherals, and software – but those claims were rejected and, therefore, cannot be re-litigated in this compliance proceeding.

¹²⁵ *See* US PRR, para. 17.

¹²⁶ EU Supplemental Submission, para. 22.

¹²⁷ These include *all* of the measures cited in the EU’s panel request, which states: “{t}he European Communities considers that the above measures are inconsistent with the obligations of the US under the following provisions: . . . Article III:4 of the GATT 1994.” EU Panel Request, p. 13.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 32

11. Article 4 of the SCM Agreement

86. In the original dispute, the DSB did not adopt any recommendations with respect to Article 4.7 of the SCM Agreement. The original panel explicitly stated that “{i}n the light of the foregoing, the Panel refrains from making a recommendation under Article 4.7 of the SCM Agreement.”¹²⁸ Accordingly, the EU claim under Article 3 of the SCM Agreement was disposed of in the original proceeding.¹²⁹

87. In its Supplemental Submission, the EU invokes a preliminary ruling in *EC – Large Civil Aircraft (21.5)* to argue that “based on the current state of the case-law, the absence of a recommendation under Article 4.7 is no bar to prohibited subsidy claims being considered in compliance proceedings.”¹³⁰ However, the two situations are not comparable and the EU’s understanding of “the case-law” is mistaken. In *EC – Large Civil Aircraft*, the United States had also brought a claim under Article 3 of the SCM Agreement, but that claim was not disposed of. The Appellate Body was unable to complete the analysis on that claim. As the Appellate Body has explained, a complaining party may not seek to raise again in an Article 21.5 proceeding a claim that has been disposed of in the original proceeding.¹³¹

12. Article 6.2 of the DSU and the EU prohibited subsidy claims

88. Article 6.2 of the DSU requires a Member to “identify the specific measures at issue and provide a brief summary of the legal basis of the complaint sufficient to present the problem clearly.” “Together, these two elements constitute the ‘matter referred to the DSB’, so that, if either of them is not properly identified, the matter would not be within the panel’s terms of reference. Fulfillment of these requirements, therefore, is ‘not a mere formality’.”¹³² Accordingly, the U.S. PRR explained that no EU claims under Articles 3.1(a) or 3.1(b) of the SCM Agreement, or under Article III of the GATT 1994, are properly within the Panel’s terms of reference.¹³³

89. The EU has since clarified that it is indeed challenging “all the identified measures” under all three of these treaty provisions.¹³⁴ In particular, the EU views the measures cited in its compliance panel request as comprising a “system of subsidies”,¹³⁵ which collectively is

¹²⁸ *US – Large Civil Aircraft (Panel)*, para. 8.7; see also *US – Large Civil Aircraft (AB)*, note 2716.

¹²⁹ See US PRR, paras. 58-59; US PR Response, paras. 76-77.

¹³⁰ EU Supplemental Submission, para. 36.

¹³¹ Section II.A discusses this issue in greater detail.

¹³² *China – Raw Materials (AB)*, para. 219 (emphasis in original) (quoting *US – Carbon Steel (AB)*, para. 125 and *Australia – Apples (AB)*, para. 416).

¹³³ US PRR, paras. 45-57.

¹³⁴ EU Supplemental Submission, para. 34.

¹³⁵ EU FWS, para. 759.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 33

inconsistent with Articles 3.1(a) and (b) SCM, and Article III GATT. However, this clarification only confirms that the EU panel request fails to “present the problem clearly,” as required by Article 6.2 DSU. The phrase “system of subsidies” does not appear there, nor is it apparent from the EU panel request how the measures could possibly operate collectively so as to induce export performance, import substitution, or preferential treatment for domestic products. Indeed, even in its first written submission, the EU fails to explain how this supposed system of supposed subsidies operates, instead resorting to conclusory statements that fail to connect the measures to the EU’s claims.¹³⁶

90. Accordingly, the EU has failed to justify the vagueness in its compliance panel request, and the United States respectfully requests that the panel make a preliminary ruling that the EU request fails to satisfy the requirements of Article 6.2 DSU with respect to the EU claims under Articles 3.1(a) and (b) and Article III GATT. The EU has also failed to make a *prima facie* case with regard to these claims, as discussed in greater detail in section III.L.

12. Conclusion

91. The United States renews all of its requests for preliminary rulings.¹³⁷ In addition, the United States also requests preliminary rulings that the EU’s claims against (i) the Washington State B&O tax credit for preproduction development; (ii) Washington State B&O tax credit for property taxes; (iii) the sales and use tax exemptions for computer hardware, software and peripherals; and (iv) the City of Everett B&O tax rate reduction, concern measures that the original panel found not to cause serious prejudice, are all outside the scope of this compliance dispute.

C. Payments and Access to Facilities, Equipment, and Employees under NASA Contracts and Space Act Agreements.

92. During the original proceedings, the United States put forward evidence showing that NASA contracted private entities, including Boeing, to conduct research to advance NASA’s missions to achieve “{t}he expansion of human knowledge of the Earth and of phenomena in the atmosphere and space” and “{t}he improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles.”¹³⁸ The EU argued that, rather than achieving any public good, NASA research programs were exclusively to develop technology for Boeing to use in its aircraft. The original panel did not adopt either party’s views. The Panel found that “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

¹³⁶ See, e.g., EU FWS, para. 759 (stating enigmatically that “the United States has, through its sustained and repeated actions over time, used subsidies to condition Boeing’s behaviour and skew sales towards exports – as surely as a dog may be conditioned to salivate upon hearing a bell.”).

¹³⁷ See US PRR, para. 60.

¹³⁸ Space Act, § 102(d) (1)-(2) (Exhibit EU-252).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

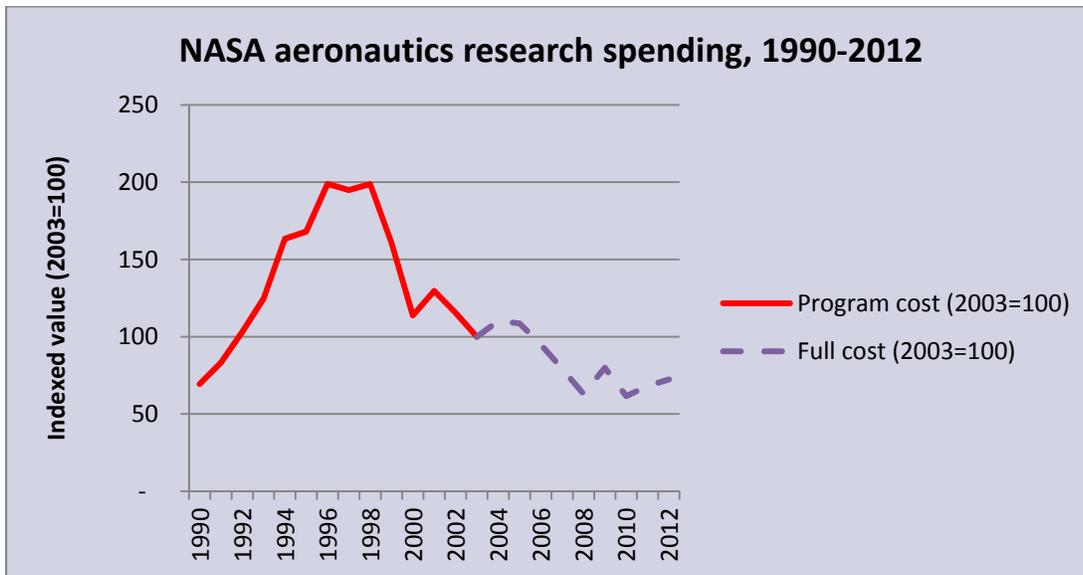
*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 34

improving U.S. competitiveness vis-à-vis foreign competitors.”¹³⁹ On the other hand, “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.”¹⁴⁰

93. As outlined in the U.S. Compliance Notification and discussed in greater detail in the initial U.S. response to the Panel’s Article 13 request for information, NASA overhauled its practices for conducting aeronautics research in the intervening period. This process, which was already under way at the end of the period covered by the Panel’s findings, led to the elimination or modification of many of the aspects of the NASA programs that led to the original panel’s findings. NASA lessened contractors’ role in choosing research priorities and designing research programs. It framed research objectives to be broadly applicable to the community and thereby stimulate competition among suppliers, introduced neutral peer review of all proposals, and eliminated the fostering of industry competitiveness as an evaluation criterion. NASA eliminated LERD protection of the results of research, and committed to maximum dissemination of the results of its research.

94. NASA also halved its average annual spending on aeronautics research as compared with the period covered by the original panel’s findings:



Source: Exhibits EU-36, USA-19, and USA-20¹⁴¹

¹³⁹ *US – Large Civil Aircraft (Panel)*, para. 7.985.

¹⁴⁰ *US – Large Civil Aircraft (Panel)*, para. 7.1100.

¹⁴¹ The two lines reflect that NASA moved to full cost accounting in 2004. At that time, it published 2003 data under the previous program cost methodology and the full-cost methodology, which allows construction of a

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 35

The real change in resource commitment is even more stark, as these figures do not account for inflation.

95. With regard particularly to the contracts that the panel and Appellate Body findings found to confer WTO-inconsistent subsidies, NASA modified the terms to bring them in line with a commercial benchmark.

96. These actions brought NASA into compliance with respect to the pre-2007 subsidies identified in the reports of the original panel and the Appellate Body. They also ensured that NASA's post-2006 contracts, cooperative agreements, and SAAs were consistent with WTO rules.

97. The legal issue in this dispute, as framed by the EU, is whether the payments, facilities, equipment, and employees NASA provided to Boeing through the programs identified by the EU, in light of the compliance measures taken by the United States, are subsidies that cause adverse effects in the period after September 23, 2012.¹⁴² The United States discusses the adverse effects element of that showing in Section IV of this submission. To establish the existence of current subsidies in line with the EU argument would require: (1) an evaluation of the efficacy of the compliance measures taken by the United States with respect to the subsidies found to exist; (2) a thorough evaluation of the terms and conditions of any new subsidies alleged by the EU, again in light of U.S. compliance measures, and (3) correct application to those facts of the legal tests for the existence of a financial contribution, conferral of a benefit, and specificity. In spite of a lengthy submission, the EU has done none of these things.

98. Section 1 below will review in depth the compliance measures taken by NASA, and how they ushered in a new approach to its funding of aeronautics research. Although the United States referenced these measures in the U.S. Notification, and provided substantial information on them in the U.S. Article 13 response,¹⁴³ the EU has, for the most part, not even attempted to discuss how they affected pre-2007 subsidies, or the contracts, cooperative agreements, and SAAs between NASA and Boeing after 2006.

99. Section 2 summarizes key aspects of the contracts and SAAs between NASA and Boeing in the FY2007-FY2012 period. These instruments are the putative financial contributions that the EU challenges. It is their terms, and not generic descriptions of the NASA programs, that will determine whether or not they are subsidies. The evidence shows that these contracts researched topics of public usefulness, which NASA disseminated to the broadest extent possible to the public. Although the United States expended considerable time and effort to make this information available in response to the Panel's Article 13 request, which had been avidly sought

1990-2003 index series for program cost and a 2003-2012 index series for full cost. These data reflect EU adjustments to remove certain expenditures that it has not challenged.

¹⁴² EU FWS, para. 49.

¹⁴³ U.S. Compliance Notification, paras. 3 and 4; Response of the United States to the Panel's Request for Information Pursuant to Article 13 of the DSU, paras. 12-16 (Feb. 28, 2013)..

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 36

by the EU, the EU largely ignored this information, choosing instead to rely on highly generalized discussions of research topics in budget materials, which indicate nothing about the terms of the actual transactions. As these terms must form the basis of any analysis of financial contribution and benefit, the EU's failure to address them is fatal to its arguments. This section also demonstrates that the magnitude of any financial contribution is vastly lower than alleged by the EU.

100. Sections 3 through 5 apply the legal tests for the existence of a financial contribution, conferral of a benefit, and specificity to the facts laid out in sections 1 and 2. On the question of financial contribution, the EU's failure to grapple with the facts leads it to incorrectly identify post-2006 NASA contracts as "akin to a joint venture." In light of changes in NASA's practices, they are properly treated as purchases of services, which, as the United States explains in Section III.C.4.a, are not a financial contribution for purposes of Article 1.1(a) of the SCM Agreement. With respect to pre-2007 contracts, the EU fails to realize the import of the Appellate Body's finding that pre-2007 contracts and SAAs are joint ventures, and accordingly applies benchmarks that do not account for all relevant terms of the transactions. Proper benchmarks, including one endorsed by the EU, demonstrate that NASA funding under these instruments was no more favorable to Boeing than a commercial entity would have provided. (Because the EU incorrectly characterized the post-2006 contracts, its benchmark analysis is completely inapplicable to those transactions.) Finally, when it comes to specificity, Section 5 explains the EU incorrectly limits its analysis to NASA, when the Appellate Body has already found that the subsidy the EU alleges – the attribution to Boeing of more intellectual property rights than it would receive under a commercial transaction – must be assessed on a broader level, and is not specific.

1. NASA has complied with the recommendations and rulings of the DSB by modifying its research contracting practices in general, and by amending the terms of its contracts with Boeing.

101. The Appellate Body found that the NASA procurement contracts at issue in the original dispute were "akin to a species of joint venture" entailing a financial contribution similar to an equity infusion. It found further that they conferred a benefit to Boeing because the attribution of intellectual property rights was more favorable to Boeing than under a commercial transaction. The Appellate Body identified several features of those NASA contracts that led to its conclusion that they were joint ventures. In particular, it focused on evidence that NASA contributed funds and facilities, equipment, and employees (with an even greater value) to projects that produced results useful to both the U.S. government and Boeing. It also emphasized the collaborative nature of the work – that research topics were chosen in collaboration with industry and that NASA and Boeing pooled facilities and employees to conduct research. With respect to the benefit, the Appellate Body found that Boeing received greater rights in patents for inventions invented by its employees working on the NASA contracts than would be true if the funding entity were a commercial actor.

102. All of this has changed. NASA has implemented a new approach to identifying research topics and choosing suppliers of research services. It has eliminated measures that restricted

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 37

access to the non-proprietary results of its research programs. Budget cuts have halved the funding available, requiring major reductions in procurement and increasing reliance on in-house NASA workforce for the development and execution of aeronautics research. In cases where NASA procured research, the agency seeks greater contribution from contractors, and has less to offer on its part. Finally, NASA has modified the terms of contracts covered by the recommendations and rulings of the DSB to give the U.S. government greater rights in any patents resulting from work under the contracts. These steps have fully withdrawn the subsidy found to exist.

103. The Appellate Body identified several features of the contracts between NASA and Boeing that warranted treating them as joint ventures:

- “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”¹⁴⁴
- “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to Boeing under the ACT programme provided for research teams that included NASA employees.”¹⁴⁵
- “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”¹⁴⁶
- “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”¹⁴⁷
- “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”¹⁴⁸
- LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”¹⁴⁹

¹⁴⁴ *US – Large Civil Aircraft (AB)*, para. 595.

¹⁴⁵ *US – Large Civil Aircraft (AB)*, para. 594.

¹⁴⁶ *US – Large Civil Aircraft (AB)*, para. 595.

¹⁴⁷ *US – Large Civil Aircraft (AB)*, para. 595.

¹⁴⁸ *US – Large Civil Aircraft (AB)*, para. 596.

¹⁴⁹ *US – Large Civil Aircraft (AB)*, para. 596.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 38

104. NASA has modified its practices such that most of these observations no longer apply. Most importantly, in 2006, NASA changed its approach to research contracting, both in terms of the nature of the research and the way it conducted research, concluding that it needed a “reshaped vision” for its aeronautics program.¹⁵⁰ One of the primary changes was a “{s}hift in focus from technology demonstrations to fundamental research.”¹⁵¹ This meant abandoning the programs like VSP, which the original panel considered were directed at solving particular commercial problems, and concentrating on NASA’s core competencies. The agency explained that:

NASA is refocusing the Aeronautics program to place a greater emphasis on long-term investments in foundational research. The Agency is maintaining its long-standing commitment to benefit the American public by developing technologies that accomplish the following goals: make the Nation’s current and future air transportation system even safer; protect local air quality and our global climate; reduce aircraft noise to benefit airport neighbors, the aviation industry, and travelers; enable the movement of more air passengers with fewer delays; and, enable people to travel faster and farther, anywhere, anytime.¹⁵²

It is noteworthy that NASA does not list increasing the competitiveness of the U.S. aerospace industry as one of these objectives. Instead, the reformulated NASA aeronautics research objectives all aim at producing broad public goods of the kind that governments routinely seek, with a substantial focus on building and improving infrastructure.

105. NASA undertook a four-step process to achieve this new focus:

Step 1: Roadmaps. Each Aeronautics Research Mission Directorate (“ARMD”) research program assessed its long-term research goals and created a ten-year technological roadmap. They established milestones toward achieving those goals based on NASA’s unique strengths and capabilities.

Step 2: Requests for information (“RFIs”). On January 3, 2006, ARMD issued RFIs relating to its fundamental aeronautics, aviation safety, and airspace objectives. It sought five-page proposals for “non-reimbursable agreements where each party funds their own participation in the research effort” to advance the objectives outlined in the roadmaps.¹⁵³ The responses helped to identify areas of research that external stakeholders considered to be of primary interest.

¹⁵⁰ NASA 2007 Budget, p. SAE ARMD 1-1 (Exhibit USA-13).

¹⁵¹ NASA 2007 Budget, p. SAE ARMD 2-15 (Exhibit USA-13).

¹⁵² NASA 2007 Budget, p. SAE ARMD 2-1 (Exhibit USA-13).

¹⁵³ Fundamental Aeronautics RFI, pp. 2-4 (Exhibit USA-14); Aviation Safety RFI, pp. 2-4 (Exhibit USA-16); Airspace RFI, pp. 2-4 (Exhibit USA USA-16).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 39

Step 3: NASA center proposals. Using the roadmaps from Step 1 as a starting point, NASA researchers created teams to develop refined technical proposals to achieve the objectives of each program.¹⁵⁴ They incorporated feedback from the RFI process, as well as from colleagues at other government agencies. NASA then submitted proposals to a rigorous review process to ensure technically credible and relevant research objectives.

Step 4: NASA Research Announcement (NRA). In May 2006, NASA issued an NRA for Research Opportunities in Aeronautics to solicit proposals from the external community for foundational research in the areas outlined in the center proposals. It included the three areas covered by the RFI, as well as a fourth category for facilities-related research.¹⁵⁵

106. Offerors were permitted to seek grants, cooperative agreements, or contracts. NASA received more than 700 proposals from more than 110 universities and more than 120 companies and non-profit organizations. NASA then submitted all proposals to peer review and, based on the results, decided which proposals to award

107. NASA issued a second NRA in 2008, using much the same terms as the 2006 NRA. It expanded scope slightly by adding a request for cross-program research.¹⁵⁶ It invited previous successful bidders to propose funding of successor projects, but cautioned that “{s}uch submissions will be subjected to full peer review and considered with neither advantage nor disadvantage along with new proposals that are received by NASA.”¹⁵⁷ Another NRA followed in 2009, this time including funding for NASA projects derived from the American Recovery and Reinvestment Act,¹⁵⁸ which included heightened requirements on transparency regarding the spending of government funds. Terms were otherwise quite similar to previous NRAs. NASA issued another NRA in 2010, on terms very similar to those of the 2009 NRA. One major addition was a solicitation for proposals for research under the new Integrated Systems Research Program.¹⁵⁹ The agency issued another NRA in 2011.¹⁶⁰

108. A before-and-after comparison illustrates the significance of the changes. During the 1989-2006 time period NASA’s big aeronautics projects were typically supported at Langley Research Center by Indefinite Delivery/Indefinite Quantity (“IDIQ”) contracts. These IDIQ contracts typically had general statements of work covering one or more aeronautics-related technical disciplines, with much more detailed statements of work being provided in task order

¹⁵⁴ Fundamental Aeronautics RFI, p. 3 (Exhibit USA-14); Aviation Safety RFI, p.3 (Exhibit USA-15); Airspace RFI, p. 3 (Exhibit USA-16).

¹⁵⁵ NRA NNH06ZNH001 (May 23, 2006) (Exhibit USA-17) (“2006 NRA”).

¹⁵⁶ NRA NNH08ZEA001, p. E-1 (Exhibit EU-91).

¹⁵⁷ NRA NNH08ZEA001, p. 4 (Exhibit EU-91).

¹⁵⁸ NRA NNH09ZEA001, p. 4 (Exhibit EU-184).

¹⁵⁹ NRA NNH10ZEA001, p. D.1 (Exhibit EU-133).

¹⁶⁰ NRA NNH11ZEA001N (Exhibit USA-255).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 40

requests for proposals. In some cases IDIQ contracts were awarded to multiple contractors, which enabled competition among them for tasks. In other cases single IDIQ contract awards were made, but even under those contracts detailed statements of work were provided with the task requests for proposals. In contrast, NASA now relies significantly on NASA Research Announcements which contain much more general statements of task, are broadly open to the community, and result in many bids from individual organizations as well as teams.

109. The FY2007-FY2012 period also saw a continued decrease in the amount that NASA spends on aeronautics research, both in-house and through contractors. Annual contracting by the four aeronautics research centers more than halved during the FY2007-FY2012 period, as compared with the 1989-2006 period.¹⁶¹ The decrease in terms of the volume of aeronautics research was actually more pronounced because, the four centers began devoting more of their resources to non-aeronautics: space propulsion, structures, power and communications at Glenn Research Center; atmospheric sciences, exploration vehicle development and composite structures for spacecraft at Langley Research Center; and lunar science, biology and astrobiology, airborne sciences, entry systems, exoplanet research, autonomy and robotics, human factors, and advanced computing at Ames Research Center. In fact, less than 50 percent of funding at these four centers on average now comes from ARMD. Contracting with Boeing for aeronautics research followed this trend, [**BCI**] over FY2007-FY2012 as compared with the 1989-2006 period. In line with this new approach, NASA focused less on commercial outcomes and more on foundational research with results accessible to the general public.

110. NASA has also changed its approach to facilities usage. Whereas foreign companies faced limitations on usage of NASA facilities in the past, they are now entitled to use those facilities on the same basis as U.S. companies, as embodied in NASA Procedural Directive 1370.1, issued on October 26, 2007.¹⁶² Under this regime, Airbus has in fact entered into reimbursable SAAs for use of NASA wind tunnels. In addition, Airbus and NASA currently are negotiating a non-reimbursable SAA to collaborate on an ice crystal atmospheric characterization study.

111. Finally, with regard to the transactions found to confer a subsidy on Boeing, NASA and the company reached an agreement to modify the allocation of patent rights. In line with Contract D, [**BCI**]. This made the allocation of intellectual property rights no more advantageous than under a commercial transaction. The United States confirmed this conclusion by reference to the intellectual property terms of Wichita State University's National Institute for Aviation Research, an entity that the EU identified as providing a benchmark for research transactions.¹⁶³

¹⁶¹ *NASA obligations by center* (Exhibit USA-18(BCI)) (USA13-450).

¹⁶² NASA Policy Directive 1370.1 (Oct. 26, 27) (Exhibit USA-256).

¹⁶³ EU FWS, para. 184.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 41

2. *Payments and access to facilities, equipment, and employees at issue*

112. Although the EU challenges NASA’s alleged payments and provisions of facilities, equipment, and employees to Boeing, its discussion of NASA research programs essentially ignores the multitude of contracts that memorialize these terms of the transactions. Instead, the EU relies upon generalizations gleaned from public relations materials and press documents. While these sources may have their uses, when one of the parties has provided a mountain of information on the actual terms of the transactions in question, public relations materials and press documents provide an utterly inadequate basis for sustaining a claim of subsidization.

113. The EU asserts that NASA paid Boeing \$1.8 billion for non-engine aeronautics research under the programs challenged by the EU from FY2007 through FY2012.¹⁶⁴ The real value of payments is vastly lower: approximately \$[BCI].¹⁶⁵ Space Act Agreements provided access to facilities, equipment, and employees of approximately \$[BCI].¹⁶⁶ Access to facilities, equipment, and employees. Boeing’s use of NASA computers while working on NASA contracts was [BCI].¹⁶⁷ It did not otherwise use NASA computers. Access to other NASA facilities under contracts was also quite limited, although the United States does not at this time have an estimate. Provision of NASA equipment under contracts funded under the programs challenged by the EU was approximately \$[BCI].¹⁶⁸

114. In the original proceeding, the EU organized its allegations with respect to eight programs: 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”).¹⁶⁹ By 2004, all of these programs except Aviation Safety and VSP had terminated. As late as 2005, NASA planned to continue VSP into 2009.¹⁷⁰

115. In line with the new approach to research contracting outlined in the previous section, in 2006, NASA terminated VSP early and replaced it with the Fundamental Aeronautics Program,

¹⁶⁴ EU FWS, para. 56, figure 1.

¹⁶⁵ *Obligations under NASA contracts with Boeing, FY2007-FY2012, by program* (Exhibit USA-37(BCI)). This amount includes payments under Contract NNA08BA33C. Both the statement of work and the funding source are classified. For purposes of this proceeding, as a conservative estimate, the United States treats this funding as falling under the EU’s claims.

¹⁶⁶ *NASA SAAs with Boeing* (Exhibit USA-60(BCI)).

¹⁶⁷ *Boeing use of NASA computers, 2007-2012* (Exhibit USA-248(BCI)).

¹⁶⁸ *Equipment provided under NASA contracts and agreements* (Exhibit USA-249(BCI)).

¹⁶⁹ *US – Large Civil Aircraft (Panel)*, para. 7.943. QAT was, in fact, not a separate program, but a project under the VSP. NASA R&T Base Budget Estimates, FY 2003, p. SAT 4-4 (Exhibit EU-48).

¹⁷⁰ NASA 2005 Budget, p. SAE 16-17 (Exhibit USA-262).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 42

albeit with 20 percent less funding for 2007.¹⁷¹ The Aviation Safety and Security Program was also reorganized and relaunched as the Aviation Safety Program.¹⁷² The Airspace Systems Program, which the EU concedes is WTO-consistent, turned to focus on future technology for the Next Generation Air Transportation System (“NGATS”, now known as “NextGen”), the new U.S. nation-wide air traffic management system.¹⁷³

116. NASA also undertook an agency-wide effort through the Shared Capabilities Asset Program (“SCAP”) to manage and improve its infrastructure:

NASA is responsible for the stewardship of test facilities and engineering capabilities, many of which are unique in the United States. NASA must maintain appropriate levels of competency in areas such as large aeronautics ground test facilities including wind tunnels, propulsion test facilities, and supercomputing capabilities. NASA must retain and manage the necessary set of test facilities to serve national needs.¹⁷⁴

SCAP establishes an alliance between all Centers with like assets makes recommendation on disposition of capabilities no longer required, identifies re-investment/re-capitalization requirements within and among classes of assets, and implements changes. SCAP ensures tests facilities identified as essential by the agency are in a state of readiness. Core capabilities supported within SCAP relevant to aeronautics are simulators which provide scientists and engineers with tools to explore, define, and resolve issues in both vehicle design and mission operations. Through reimbursable agreements, these capabilities are available for use by other organizations. Other SCAP capabilities include thermal vacuum chambers and the Arc Jet Facility.

117. SCAP coordinates closely with the Aeronautics Test Program and High End Computing Capability (“HECC”) in development of agency practices for infrastructure management, although those specific activities are managed separately.¹⁷⁵ All SCAP, ATP and HECC expenditures go to management, maintenance, and improvements to NASA testing infrastructure, and do not fund research.

118. In 2009, NASA reorganized its research activities to create the Integrated Systems Research Program, starting in FY 2010. It explained that the new program:

will take an integrated system-level approach to reduce the environmental impact of aviation (in terms of noise, local and global emissions, and local air quality) in

¹⁷¹ NASA 2007 Budget, p. SAE ARMD 2-14 (Exhibit USA-13).

¹⁷² NASA 2007 Budget, p. SAE ARMD 2-8 (Exhibit USA-13).

¹⁷³ NASA 2007 Budget, p. SAE ARMD 2-11 (Exhibit USA-13).

¹⁷⁴ NASA 2007 Budget, p. SAE CASP 5-2 (Exhibit USA-13).

¹⁷⁵ NASA 2007 Budget, p. SAE CASP 5-1 (Exhibit USA-13).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 43

the area of air vehicle technologies. As the NextGen evolves to meet the projected growth in demand for air transportation, the environmental impacts of noise and emissions are a growing concern and could limit the ability of the system to accommodate growth. The integrated system-level research in this program will be coordinated with on-going long-term, foundational research within the three other research programs, and will focus specifically on maturing and integrating technologies in major vehicle systems and subsystems for accelerated transition to practical application.¹⁷⁶

Again, the objectives center on public goods, in particular, environmentally sustainable growth in the capacity of the air transportation system. As with Fundamental Aeronautics and Aviation Safety, NASA committed to acquire research services through an NRA, using full and open competition to “to solicit innovative proposals in key research areas that complement NASA expertise.”¹⁷⁷

a. Fundamental Aeronautics Program (payments of \$[BCI])

119. The EU alleges that NASA conferred \$785 million in payments, facilities, equipment and employees to Boeing through this program during the 2007-2012 period. The real value of payments to Boeing for aeronautics research was \$[BCI]. The EU also asserts that the utility of this work is restricted to Boeing, but an evaluation of the contracts shows that this research in fact had broad public utility.

120. NASA formulated the general objectives of this program as outlined above, based on input from the research centers, the academic community, the aerospace industry, and the air transportation sector. It detailed these objectives in the 2006 NRA, and invited “all categories of U.S. and non-U.S. organizations, including educational institutions, industry, and not-for-profit institutions” to submit proposals.¹⁷⁸ The factors for evaluating proposals were:

- (1) Relevance to the objectives of the program, as laid out in the NRA and NASA’s Strategic Plan, and the importance of proposed work to the primary objectives of the project for which it was proposed (30 percent weight);
- (2) Technical merit, including credibility of the technical approach, the proposer’s experience in the area to be studied, and capabilities of the personnel proposed for the work (40 percent weight);
- (3) Effectiveness of the work plan in terms of clear metrics and tangible output, and a clear statement of what intellectual property would be publicly available at the end of the work. In this regard, NASA emphasized that “*it is our intent to share*

¹⁷⁶ NASA 2010 Budget, p. AERO-39 (Exhibit EU-41).

¹⁷⁷ NASA 2010 Budget, p. AERO-41 (Exhibit EU-41).

¹⁷⁸ 2006 NRA, p. 4 (Exhibit USA-21).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 44

all knowledge developed under this solicitation, thus, any restrictions to that objective will cause a lower score in this area.” (emphasis added) (25 percent weight)

- (4) Proposed cost, including the reasonableness and realism of the proposed budget (5 percent weight).¹⁷⁹

All proposals were subject first to peer review with regard to these factors, and then to evaluation by NASA officials to ensure the awards covered all program areas and that the total cost of approved projects would not exceed available funding limits.

121. NASA expected that Fundamental Aeronautics would fund 35 of the proposals submitted under this NRA, with a follow-on effort envisaged for additional topics.¹⁸⁰ In fact, NASA received 706 proposals to topics across all four FAP projects, and eventually funded 99 of them. In 2010, NASA conducted a Phase 2 bidding process in which the initially selected contractors were able to propose additional work. The Phase 2 proposals went through a similar evaluation process, with the exception that performance during Phase 1 was an additional factor for consideration. Again, NASA emphasized its intent to provide all contract deliverables to the public with unlimited data rights.¹⁸¹

122. The majority of the work Boeing conducted under this program after 2006 was organized under two basic ordering agreements: Contract NNL04AA11B (“2004 BOA”) and Contract NNL08AA16B (“2008 BOA”).¹⁸² Basic ordering agreements are framework contracts, specifying the legal clauses applicable to awards that the agency makes in the future. This approach allowed NASA to focus on the critical contract terms for each work package and implement them through a task order, rather than go through the substantial expense of negotiating a new contract each time it contracts for research.

The 2004 BOA: \$[BCI]

123. NASA’s Langley Research Center and Boeing entered into the 2004 BOA as part of the VSP effort to research structures and materials for aerospace vehicles and aerodynamic, aerothermodynamic and acoustics technology for aerospace vehicles. This effort passed to the Fundamental Aeronautics Program after 2006, with Boeing working on 14 tasks under this contract in the FY2007-FY2012 period. \$[BCI] of the payments for these tasks came from FAP, with small amounts from Safety Mission Success, a CASP project, and a small amount

¹⁷⁹ 2006 NRA, pp. A-2 – A-3 (Exhibit USA-21).

¹⁸⁰ 2006 NRA, p. A-45 (Exhibit USA-21).

¹⁸¹ Task NNL08AD01T, p. 10 (Exhibit USA-22).

¹⁸² A third BOA, NNC10BA05B, resulted in payments of less than \$[BCI]. *Obligations under NASA contracts with Boeing, FY2007-FY2012* (Exhibit USA-251(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 45

from Aviation Safety.¹⁸³ The work had broad public use in developing knowledge for public dissemination, providing information that would help DoD to select future combat aircraft, and acquiring knowledge that would help regulators to perform their duties.

124. The BOA provided that each task would have the standard NASA patent rights clause.¹⁸⁴ The contract envisaged that there would be no unlimited rights data, and provided for the delivery of certain data with limited rights, and certain software with restricted rights, depending on the agreement struck between the parties regarding the issuance of each task.¹⁸⁵ (Limited rights apply to data developed at private expense, while restricted rights generally apply to software developed at private expense.¹⁸⁶)

125. The BOA also laid out a detailed work plan for research on materials and structure technology, and aerodynamic, aerothermodynamic, and acoustics technology for aerospace vehicles related to aircraft and spacecraft.¹⁸⁷ NASA centers sponsoring work related to these topics then issued task orders specifying in more detail the work to be done, but otherwise relying on the BOA for other terms of the contract.¹⁸⁸ Each task was required to contain a functional description of the work, maximum dollar amount authorized, and “any other resources (travel, materials, equipment, facilities, etc.) authorized.”¹⁸⁹

126. Task NNL09AD50T under this BOA was part of an effort for the “development of a prototype subscale blended wing body aircraft in partnership with NASA and DoD.”¹⁹⁰ The prototype had been produced in previous phases under different tasks. This task called for rigorous testing of the aircraft to determine its flight performance.¹⁹¹ It provided for the use of NASA test range and range support facilities, as well as use of Building 4847 at Dryden Flight Research Center for 4 months, at a cost of [BCI].¹⁹² The task did not provide for government

¹⁸³ Five tasks were funded entirely through ETDP: NNL08AD08T, NNL08AD38T, NNL08AD70T, NNL09AC35T, and NNL09AC78T. *NASA contracts and cooperative agreements with Boeing, FY2007-FY-2012* (Exhibit USA-23(BCI)).

¹⁸⁴ 2004 BOA, p. 32 (Exhibit USA-24(HSBI)) (incorporating clause 1852.227-70, which is the standard NASA patent clause).

¹⁸⁵ 2004 BOA, p. 31 (Exhibit USA-24(HSBI)) (incorporating clause 52.227-14, Alternates II and III).

¹⁸⁶ 48 CFR § 52.227-14 (Exhibit USA-233).

¹⁸⁷ 2004 BOA, pp. 3-11(Exhibit USA-24(HSBI)). Several tasks under this BOA were directed solely at space-related technologies, such as manufacturing of the Ares V launch vehicle, design of struts for a lunar lander, materials for construction of a vehicle to take humans to Mars, and design of a successor to the space shuttle. These were funded exclusively through the Exploration Technology Development Program and other funds from the Exploration Systems Mission Directorate.

¹⁸⁸ *E.g.*, Task NNL05AB57T (Exhibit USA-25(BCI)).

¹⁸⁹ 2004 BOA, p. 25 (Exhibit USA-24(HSBI)).

¹⁹⁰ Task NNL09AD50T, p. 2 (Exhibit USA-26(BCI)).

¹⁹¹ Task NNL09AD50T, pp. 3-4 (Exhibit USA-26(BCI)).

¹⁹² Task NNL09AD50T, p. 5 (Exhibit USA-26(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 46

furnished property.¹⁹³ This effort would clearly aid the Air Force in deciding the extent to which blended wing body aircraft would be viable in future aircraft acquisitions. NASA has published Boeing's report on the research conducted under this task.¹⁹⁴

127. Task NNL10AA71T sought the creation of a high-quality body of data on noise produced by conventional and unconventional aircraft configurations to support future studies of the methods most likely to reduce noise from the integration of engines into airframes.¹⁹⁵ Boeing was required to design all hardware necessary for the test, including by repurposing models used in previous experiments, if possible.¹⁹⁶ Multiple reports on this experiment have been published.¹⁹⁷

128. Task NNL10AB00T required the design, analysis, and fabrication of tooling for a large multibay test article to study bending and internal loads representative of a hybrid wing body aircraft made primarily of PRSEUS materials. (The test article would be fabricated pursuant to a separate contract or contracts.)¹⁹⁸ Boeing was instructed to share data with universities with a view to involving undergraduate and graduate students in the research process.¹⁹⁹ The task provided for no government-furnished property and no use of facilities.²⁰⁰

129. Task NNL10AA99T provided for design and fabrication of a test article using PRSEUS structural concepts, with a view to providing it to the FAA to be tested to failure.²⁰¹ Boeing provided a final report to NASA, which is still in the process of review for publication.²⁰² The task provided neither government property nor access to government facilities.²⁰³

130. Task NNL08AA36T required Boeing to apply its expertise in laminar flow control to the evaluation of benefits achievable by using hybrid laminar flow control on a supersonic aircraft. The company was charged with determining an optimal design, and then evaluating performance

¹⁹³ Task NNL09AD50T, p. 6 (Exhibit USA-26(BCI)).

¹⁹⁴ *List of NASA technical reports* (Exhibit USA-27).

¹⁹⁵ Task NNL10AA71T, p. 2 (Exhibit USA-28(BCI)) (USA13-314); *Equipment provided under NASA contracts and agreements* (Exhibit USA-274(BCI)).

¹⁹⁶ Task NNL10AA71T, p. 5 (Exhibit USA-28(BCI)).

¹⁹⁷ "Hybrid Wing Body Slat Noise Analysis," AIAA Paper 2013-0462 (Jan. 7, 2013) (Exhibit USA-257); "Open Rotor Aeroacoustic Installation Effects for Conventional and Unconventional Airframes," AIAA Paper No. 2013-2185 (available for purchase at <http://arc.aiaa.org/doi/abs/10.2514/6.2013-2185?prevSearch=&searchHistoryKey=>).

¹⁹⁸ Task NNL10AB00T, p. 3 (Exhibit USA-29(BCI)).

¹⁹⁹ Task NNL10AB00T, p. 4 (Exhibit USA-29(BCI)).

²⁰⁰ Task NNL10AB00T, p. 10 (Exhibit USA-29(BCI)).

²⁰¹ Task NNL10AA99T, p. 3 (Exhibit USA-250(BCI)).

²⁰² *List of NASA technical reports* (Exhibit USA-27).

²⁰³ Task NNL10AA99T, p. 8 (Exhibit USA-250(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 47

against a baseline using CFD analysis.²⁰⁴ The task provided neither government property nor access to government facilities.

131. The remainder of the funds under this BOA went to completion of smaller value tasks²⁰⁵ and the continuation of tasks begun prior to 2007.²⁰⁶

132. These summaries demonstrate that, contrary to the EU assertions, work under these contracts produced a variety of public goods. Task NNL09AD50T provided information that the Air Force could use in choosing design options for future combat aircraft. The high-quality acoustic data generated under Task NNL10AA71T will allow NASA scientists and regulators to better study sources of aircraft noise. Task NNL08AA36T produced generalized information regarding aerodynamics of supersonic aircraft. The PRSEUS studies provided knowledge useful to safety regulators and any entity planning to build a composite aircraft. The EU asserts that NASA prevented the use of published data related to PRSEUS construction methods by allowing Boeing to use proprietary processes to produce the panels.²⁰⁷ This is not the case. First, Boeing's use of its own manufacturing process was scarcely optional – NASA could hardly ask Boeing to use another company's manufacturing processes to conduct the experiments. Moreover, Boeing's vacuum-assisted resin transfer system is not the only way to achieve "high fibre volumes."²⁰⁸ The published information would be useful to any other entity that had a different mechanism for achieving this objective.

The 2008 BOA: \$[BCI]

133. NASA's Langley Research Center and Boeing entered into the 2008 BOA to provide a framework for tasks given to Boeing as a result of any winning proposals it submitted in response to the 2007 NRA. Essentially all of the funds came from the Fundamental Aeronautics Program.²⁰⁹ The BOA incorporated the standard federal patent and data rights clauses, specifying that individual tasks might contain additional provisions.²¹⁰ The BOA did not contain any statement of work, as the work allotted to Boeing would depend on the results of its competition with other suppliers seeking to meet NASA's research objectives.²¹¹ With regard to

²⁰⁴ Task NNL08AA36T, pp. 4-6 (Exhibit USA-30(BCI)).

²⁰⁵ Task NNL08AD73T (Exhibit USA-31(BCI)).

²⁰⁶ Task NNL05AB57T (Exhibit USA-25(BCI)); Task NNL05AC53T (Exhibit USA-32(BCI)); Task NNL05AD23T (Exhibit USA-33(BCI)); Task NNL06AA01T (Exhibit USA-34(BCI)); Task NNL06AA09T (Exhibit USA-35(BCI)); and Task NNL06AB63T (Exhibit USA-36(BCI)).

²⁰⁷ EU FWS, para. 82.

²⁰⁸ EU FWS, para. 82.

²⁰⁹ *NASA FY2007-FY 2012 obligations for aeronautics research* (Exhibit USA-37(BCI)).

²¹⁰ 2008 BOA, pp. 17 and 23-25 (Exhibit USA-38(HSBI)). These included the Bayh-Dole allocation of patent rights and data rights provisions described by the original panel. *US – Large Civil Aircraft (Panel)*, paras. 7.1277 and 7.1300-7.1301.

²¹¹ 2008 BOA, p. 5 (Exhibit USA-38).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 48

facilities and equipment, the BOA provided that “Government Furnished Property will be provided if and as specified in individual orders.”²¹²

134. As a result of the competition, Boeing qualified to conduct 11 tasks pursuant to this BOA. The largest, Task NNL11AA00T, related to Subsonic Ultra-Green Aircraft Research (“SUGAR”), which provided the government unlimited data rights, except for data developed at private expense, and called for the production and delivery of three research reports suitable for public dissemination.²¹³ Work under this task is scheduled for completion in 2014.²¹⁴ The results are highly speculative, aimed at N+3 and N+4 technologies for entry into service in the 2030-2035 and 2040-2050 time periods, respectively.²¹⁵ Another task related to SUGAR was NNL08AD01T, which called for a generalized prediction of the challenges faced by commercial aircraft operators and the types of vehicle capabilities needed to meet those needs.²¹⁶ There was no government furnished property or access to government facilities.²¹⁷ NASA published the results of this effort.²¹⁸ The EU notes Boeing’s work on various SUGAR projects,²¹⁹ but the only work it asserts is of relevance to actual aircraft is NNL11AC16T,²²⁰ which we discuss below with regard to the Integrated Systems Research Program, which funded it.

135. The second largest task, NNL10AA00T, called for study of the [[**HSBI**]].²²¹ The contract provided for standard data and patent rights, and called for delivery of a technical report suitable for public dissemination, which was not delivered during the data collection period because the task remained open.²²² Although there was no government furnished property, the task provided [[**HSBI**]], with a total cost of [**BCI**].²²³ This work was partially based on the results of Task NNL08AC76T, which produced a report outlining market, environmental, and regulatory concerns likely to evolve with respect to supersonic air transport in the 2030-2035 timeframe, identify technology concepts to meet those concerns, and evaluate the strengths of the

²¹² 2008 BOA, p. 5 (Exhibit USA-38).

²¹³ Task NNL11AA00T, Attachment J-2, pp. 1, 11-13, and 15 (Exhibit USA-39). This task was a Phase 2 effort derived from work under Task NNL08AD01T (Exhibit USA-22).

²¹⁴ Task NNL11AA00T, p. 3 (Exhibit USA-39).

²¹⁵ Task NNL11AA00T, SOW, p. 2 (Exhibit USA-39).

²¹⁶ Task NNL08AD01T, p. 12 (Exhibit USA-22).

²¹⁷ See generally Task NNL08AD01T (Exhibit USA-22).

²¹⁸ *List of NASA Technical Reports* (Exhibit USA-27).

²¹⁹ EU FWS, paras. 87-89

²²⁰ EU FWS, para. 89.

²²¹ Task NNL10AA00T, pp. 18 and 20 (Exhibit USA-40(HSBI)). This task was a Phase 2 effort derived from work under Task NNL08AC76T (Exhibit USA-41(HSBI)) and Task NNL08AA35T (Exhibit USA-42 (HSBI)).

²²² Task NNL10AA00T, pp. 11 and 28 (Exhibit USA-40(HSBI)).

²²³ Task NNL10AA00T, p. 25 (Exhibit USA-040(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 49

concepts.²²⁴ The task provided neither government property nor facilities.²²⁵ Task NNL08AA35T also addressed supersonic flight, but in the nearer term. It called for the identification of the optimal mission, capacity in the 25-100 passenger range, and performance for such an aircraft based on the expected regulatory conditions for the 2020 timeframe.²²⁶ NASA neither furnished government property nor provided access to government facilities.²²⁷ The report on this work has been published.²²⁸ The EU argues that the supersonic research is relevant because NASA funded Boeing to develop a 100-200 seat supersonic aircraft under Task NNL08AC76T.²²⁹ The EU neglects to mention that most of the funding related to this topic was devoted to the 35-70 passenger option, or that the 100-200 seat configuration is a concept exercise focusing on the 2030-2035 timeframe, and so of no relevance to the market today.²³⁰

136. The Fundamental Aeronautics Program also conducted research into hypersonic flight. One large task, NNL08AB43T paid Boeing to [[**HSBI**]]²³¹ It provided for access to government facilities in the form of limited time on the NASA supercomputer.²³² Task NNL08AB30T involved [[**HSBI**]].²³³ NASA did not furnish government property or provide access to government facilities.²³⁴ The EU does not assert that NASA's hypersonic flight research has any relevance to large civil aircraft.

137. Task NNL08AB29T called for [[**HSBI**]]²³⁵ NASA furnished neither property nor access to government facilities.²³⁶

138. Task NNL12AD05T calls for [**BCI**].²³⁷ It provides neither government property nor access to facilities.²³⁸ Work is still under way on this task.²³⁹

²²⁴ *N+3 Advanced Concept Studies for Supersonic Commercial Transport Aircraft Entering Service in the 2030-2035 Period*, Report CR-2011-217084, p. 7 (Exhibit EU-150).

²²⁵ See generally Task NNL08AC76T, (Exhibit USA-41(HSBI)).

²²⁶ Task NNL08AA35T, p. 9 (Exhibit USA-42(HSBI)).

²²⁷ Task NNL08AA35T, p. 5 (Exhibit USA-42(HSBI)).

²²⁸ *List of NASA technical reports* (Exhibit USA-27).

²²⁹ EU FWS, para. 95, note 187.

²³⁰ Task NNL08AC76T, p. 12 (Exhibit USA-41(HSBI)).

²³¹ Task NNL08AB43T, p. 12 (Exhibit USA-43(HSBI)).

²³² Task NNL08AB43T, p. 3 (Exhibit USA-43(HSBI)).

²³³ Task NNL08AB30T, p. 11 (Exhibit USA-44(HSBI)).

²³⁴ See generally Task NNL08AB30T (Exhibit USA-44(HSBI)).

²³⁵ Task NNL08AB29T, pp. 11-12 (Exhibit USA-45(HSBI)).

²³⁶ See generally Task NNL08AB29T (Exhibit USA-45(HSBI)).

²³⁷ Task NNL12AD05T, p. 18 (Exhibit USA-46(BCI)).

²³⁸ See generally NNL12AD05T (Exhibit USA-46(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 50

139. Task NNL08AA80T provided for experiments to produce a plan for validation of a low-sonic-boom aircraft configuration based on NASA's F-16/SL-1 experimental vehicle, with an option for actual wind tunnel testing of the configuration.²⁴⁰ NASA furnished no government property, but there was provision for testing at Dryden Flight Research Center.²⁴¹ The EU asserts that this task provided for access to NASA facilities for wind tunnel and flight testing, but that was only an option under the contract if the agency considered that further work would be productive. NASA did not exercise that option.²⁴²

140. The 2008 BOA also provided for work clearly outside the scope of the EU's claims. One task was funded through the Airspace Program, which the EU is not challenging. Others provided for research into inflatable aerodynamic decelerators for delivering payloads into the atmosphere of extraterrestrial planets,²⁴³ **[[HSBI]]**,²⁴⁴ and supersonic *small* civil aircraft. The remaining work had broad public objectives – devising CFD codes for future aeronautics research and researching environmentally sound air travel.

*Agreement NNC10AA02A*²⁴⁵

141. This cooperative agreement provided for research into a large-scale advanced exhaust system. The SOW is classified. As Boeing is unable to incorporate classified technology into its civil aircraft, or even discuss such technology with anyone who lacks a U.S. Government security clearance, work under this agreement is of no use to large civil aircraft, which must be capable of flying – and being repaired – anywhere in the world.

Contract NNA06BC41C

142. This contract called for research to support future rotorcraft utilization in both civil and military spheres. It envisaged the issuance of task orders for the conduct of specific research in a number of areas: **[BCI]**.²⁴⁶ The contract allowed for use of **[[HSBI]]** in government property, but no production or research facilities.²⁴⁷

²³⁹ *List of NASA technical reports* (Exhibit USA-27).

²⁴⁰ Task NNL08AA80T, p. 9 (Exhibit USA-47(BCI)).

²⁴¹ Task NNL08AA80T, p. 3 (Exhibit USA-47(BCI)).

²⁴² Task NNL08AA80T, p. 3 (Exhibit USA-47(BCI)); Task NNL08AA80T, Modification 1, frame 20/22 (Exhibit USA-47(BCI)).

²⁴³ Task NNL08AB11T, p. 8 (Exhibit USA-48(HSBI)).

²⁴⁴ Task NNL08AB43T (Exhibit USA-43(HSBI)) and Task NNL08AB30T (Exhibit USA-44(HSBI)).

²⁴⁵ This contract also received **[[BCI]]** from CASP, which the EU has not challenged.

²⁴⁶ Contract NNA06BC41C, pp. 4-6/115 (Exhibit USA-49(HSBI)).

²⁴⁷ Contract NNA06BC41C, pp. 17-18/115 (Exhibit USA-49(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 51

143. Glenn Research Center funded SAA3-1026 through the ISRP, with the object of developing software to [BCI].²⁴⁸ Rights in inventions worked similarly to SAA1-1018.²⁴⁹ The parties did not foresee the exchange of proprietary information, and provided that any data developed by NASA under the Agreement that qualified as proprietary would be treated as such for two years, after which time it could be released to the public.²⁵⁰ NASA also reserved the right to distribute [BCI] publicly, subject to the protection of proprietary data.²⁵¹ NASA and DoD both use the software for their own internal cost estimating purposes.²⁵²

Contract NNC07CB38C

144. The SOW for this contract is classified,²⁵³ which is a strong indication by itself that Boeing cannot use the results of this exercise for the production of large civil aircraft, which must be able to fly throughout the world without restriction. In addition, the general description of the work – “advanced exhaust system project”²⁵⁴ – suggests a connection with engines that would also bring it outside the scope of the EU’s claims.

Contract NNC07CB76C (\$[BCI])

145. This contract sought to [[HSBI]] and all information, results, and reports would be publicly available to U.S. industries, government, and universities, with the exception of certain databases and tools developed by Boeing and [[HSBI]] at their own expense.²⁵⁵

Purchase Order NND08AA04P

146. In this purchase order, NASA [[HSBI]]²⁵⁶ The EU has not challenged such transactions as subsidies.

SAAs

147. The Fundamental Aeronautics Program was responsible for ten partially reimbursable or nonreimbursable SAAs with Boeing, not counting unfunded umbrella SAAs.

²⁴⁸ SAA3-1026, p. 1 (Exhibit USA-50(BCI)).

²⁴⁹ SAA3-1026, pp. 9-10 (Exhibit USA-50(BCI)).

²⁵⁰ SAA3-1026, p. 6 (Exhibit USA-50(BCI)).

²⁵¹ SAA3-1026, p. 5 (Exhibit USA-50(BCI)).

²⁵² Booz/Allen/Hamilton, Process Based Economic Analysis Tool (P-BEAT), slides 15-22 (Jan. 2011) (Exhibit USA-51).

²⁵³ Contract NNC07CB38C, pp. 2, 4, and J-1 (Exhibit USA-252(HSBI)).

²⁵⁴ *NASA contracts and cooperative agreements with Boeing* (Exhibit USA-23(BCI)).

²⁵⁵ Contract NNC07CB76C, pp. 3 and 24 (Exhibit USA-253(HSBI)).

²⁵⁶ Purchase Order NND08AA04P (Exhibit USA-52 (BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 52

148. The largest of these was SAA1-588, Annex 28, which provided for research into swept wing natural laminar flow. NASA agreed to [BCI]. Boeing agreed to [BCI], help to design a test, and provide documentation and data analysis for the test results.²⁵⁷ The parties agreed that subject data from the experiment would not be treated as proprietary.²⁵⁸

149. SAA1-588, Annex 27 was another relatively high-value SAA, designed to produce information on a potential [BCI].²⁵⁹ [BCI]²⁶⁰ They specified that the resulting data would be ITAR restricted unless the relevant authorities decided otherwise.²⁶¹ SAA1-588, Annex 26 also studied a [BCI]²⁶²

150. SAA DFRC-276 was an agreement between Dryden Flight Research Center and IDS, Boeing's military aircraft operation. It provided for [BCI].²⁶³ [BCI]²⁶⁴ Because NASA initially declined to participate in this exercise, AFRL started the project on its own under Cooperative Agreement FA8650-05-2-3503. NASA's contribution to the exercise appears as part of the government contribution toward that cooperative agreement.²⁶⁵

151. SAA1-640, Annex 8, provides for NASA to develop a [BCI]. [BCI].²⁶⁶

152. The other SAAs funded through the Fundamental Aeronautics Program involved smaller projects and smaller contributions from NASA:

- [BCI];²⁶⁷
- [BCI];²⁶⁸ and
- [BCI]²⁶⁹

²⁵⁷ SAA1-588, Annex 28, pp. 1-2 (Exhibit USA-55 (BCI)).

²⁵⁸ SAA1-588, Annex 28, p. 4 (Exhibit USA-55 (BCI)).

²⁵⁹ SAA1-588, Annex 27, p. 1 (Exhibit USA-54(BCI)).

²⁶⁰ SAA1-588, Annex 27, pp. 1-2 (Exhibit USA-54(BCI)).

²⁶¹ SAA1-588, Annex 27, p. 4 (Exhibit USA-54(BCI)).

²⁶² SAA1-588, Annex 26, p. 1 (Exhibit USA-53(BCI)).

²⁶³ SAA DFRC-276, p. 1 (Exhibit EU-197).

²⁶⁴ SAA DFRC-276, pp. 2 and 4 (Exhibit EU-197).

²⁶⁵ The dollar amounts of NASA's contribution are included in the dollar amounts listed in *Funds obligated to Air Force Agreements with Boeing, FY2007-FY2012* (Exhibit USA-111(BCI)). Therefore, listing them as a payment under SAA DFRC-276 would result in double counting.

²⁶⁶ SAA1-640, Annex 8, pp. 2-3 (Exhibit USA-56(BCI)).

²⁶⁷ SAA1-1155, Annex 1 (Exhibit USA-57(BCI); SAA1-757, Annex 11 (Exhibit USA-58(BCI)) (USA13-0444).

²⁶⁸ SAA3-1026, p. 1 (Exhibit USA-50(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 53

In each of the SAAs funded through this program, NASA waived costs that would otherwise have been reimbursable by Boeing, but in each instance it also received information or conducted research useful for NASA’s goal of building public aerospace knowledge. Under SAA1-588, Annex 28, NASA obtained publicly releasable data on swept wing laminar flow. Under SAA1-588, Annex 27, the agency obtained information useful to DoD in its work. Knowledge about the properties of biofuels is obviously relevant to the global aviation community seeking alternatives to traditional fossil fuels to reduce the carbon footprint of commercial aviation.

b. Aviation Safety Program (payments of \$[BCI])

153. The EU alleges that NASA conferred \$379 million in payments, facilities, equipment and employees to Boeing through this program during the 2007-2012 period.²⁷⁰ The real value of payments to Boeing for aeronautics research was \$[BCI]. The EU tries to depict this research as applicable exclusively to Boeing, but an evaluation of the contracts themselves – which the EU, for the most part, ignores – shows that this program produced a great deal of publicly useful knowledge.

154. NASA designed the Aviation Safety Program to “build upon the unique safety-related research capabilities of NASA to improve aircraft safety for current and future aircraft, and to overcome aircraft safety technological barriers that would otherwise constrain the full realization of the Next Generation Air Transportation System.”²⁷¹ NASA channeled these efforts into four areas: aircraft aging and durability, integrated intelligent flight deck, integrated vehicle health management, and integrated resilient aircraft control. NASA evaluated proposals based on four factors:

- (1) Technical merit (weighted 50 percent), including the merit of the proposal and the various capabilities of the proposer;
- (2) Relevance to NASA’s objectives (30 percent), as laid out in the NRA;
- (3) Effectiveness of the work plan (15 percent), in terms of its comprehensiveness, measurable metrics, and *results to be publically available after completion of the work*; and
- (4) cost (5 percent).²⁷²

²⁶⁹ SAA3-987, p. 1 (Exhibit USA-59(BCI)). Boeing also entered into SAA3-1255 with Glenn Research Center. Although this instrument was structured as a nonreimbursable SAA, NASA records indicate that no costs were waived. *NASA SAAs with Boeing* (Exhibit USA-60(BCI)).

²⁷⁰ EU FWS, para. 56, figure 1.

²⁷¹ NRA NNH08ZEA001N (Mar. 7, 2008, as amended), p. B-1 (Exhibit USA-61).

²⁷² NRA NNH08ZEA001N (Mar. 7, 2008, as amended), p. B-2 – B-3 (Exhibit USA-61).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 54

As with the Fundamental Aeronautics Program, all proposals were subject first to peer review with regard to these factors, and then to evaluation by NASA officials to ensure the awards covered all program areas and had a cost within available funding limits.

155. Boeing received the large majority of its Aviation Safety Program payments through three BOAs: NNL06AA04B (“2006 BOA”), NND07AA08B (“2007 BOA”), and NNL10AA00B (“Aviation Safety BOA”).

2006 BOA: \$[BCI]

156. NASA’s Langley Research Center entered into the 2006 BOA with Boeing as a vehicle to perform research into flight critical systems, funded by ARMD and ESMD, to address avionics technology gaps relevant to future air traffic management, trans-atmospheric flight, and extraterrestrial interplanetary flight.²⁷³ In the end, the Aviation Safety Program funded almost all of the work.

157. The largest task under this BOA was NNL06AA63T, which researched “crew/vehicle interface technologies that reduce the risk of pilot error, improve aircraft safety for current and future civilian and military aircraft and proactively overcome aircraft safety barriers.”²⁷⁴ NASA subsequently concluded that some of the activities under this task “have applications beyond aircraft safety (e.g., applicability to Exploration missions and Fundamental Aeronautics – Supersonics).”²⁷⁵ ESMD, CASP, and FAP accordingly also funded work under the contract.²⁷⁶ Boeing was charged with identifying critical safety issues based on industry-wide views, rather than the company’s own views; studying options for single-crew flight operations; and planning flight tests for NASA to conduct using its own aircraft.²⁷⁷ Boeing provided two reports to NASA on this research, which are currently being reviewed for publication.²⁷⁸ Several NASA employees and a Boeing engineer have already published an article detailing considerations for optimal siting of electronic vision systems in aircraft cockpits to assist landing in low-visibility conditions.²⁷⁹ This example demonstrates the broad applicability of NASA’s aeronautics research to protecting all users of air transportation, regardless of whose aircraft they use.

158. The second largest task under this BOA was NNL08AA22T, which resulted from a proposal submitted in response to the 2006 NRA, to research adaptive control architectures to

²⁷³ 2006 BOA, p. 3 (Exhibit USA-62).

²⁷⁴ Task NNL06AA63T, p. 2 (Exhibit USA-63).

²⁷⁵ Task NNL06AA63T, Modification 21, p. 5 (Exhibit USA-63, p. 71/76).

²⁷⁶ *Obligations under NASA contracts with Boeing, FY2007-FY2012* (USA-37(BCI))

²⁷⁷ Task NNL06AA63T, Modification 21, p. 5 (Exhibit USA-63, pp. 72-74/76) (USA13-92).

²⁷⁸ *List of NASA technical reports* (Exhibit US-270).

²⁷⁹ J. Arthur, M. Norman, L. Kramer, L. Prinzel, K. Ellis, S. Harrison, and J. Comstock, *Enhanced vision flight deck technology for commercial aircraft low-visibility surface operations* (2013) (Exhibit USA-64).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 55

respond to unforeseen or adverse flight conditions.²⁸⁰ Another task, NNL12AB38T, required an evaluation of safety issues likely to arise during implementation of the NextGen air traffic management system and assess whether existing tools were sufficient to address each issue.²⁸¹ NASA has already published the report containing the results of this work.²⁸² These tasks did not provide for use of government facilities or equipment. The identification of safety issues arising during implementation of a new air traffic management system is obviously critical for the governmental purpose of protecting the public from aviation accidents and maintaining critical air transportation infrastructure. Identifying ways to respond quickly and effectively to emergencies seems a similar public objectives.

159. As can be seen from these tasks, the 2006 BOA developed information that had use far beyond Boeing and far beyond the development and production of large civil aircraft. As NASA itself found, this work had relevance to NASA space exploration activities, which the EU is not challenging. Providing public information on single-crew flight operations and siting of electronic vision systems has obvious usefulness to air transportation suppliers and regulators seeking to ensure the safety and efficiency of air transportation.

2007 BOA: \$[BCI]

160. NASA's Dryden Flight Research Center entered into the 2007 BOA because it owns several test aircraft manufactured by Boeing, including two F-18 and two F-15 fighters. NASA considered that:

DFRC has a need for a technical contractor to support experiments and certain aspects of flight operations for these aircraft for which unique knowledge of the aircraft gained in its design and manufacture is required. In addition, DFRC may need unique Boeing facilities, tools, and or drawings used in the aircraft design and manufacture to perform aircraft modification, or repair of the Boeing manufactured aircraft.²⁸³

To these ends, NASA contracted with Boeing to perform nine tasks:

- Return NASA's F/A-18 test plane to remove modifications made to its wings *[[HSBI]]*,²⁸⁴
- *[[HSBI]]* the flight simulator for the F/A-test test plane;²⁸⁵

²⁸⁰ Task NNL08AA22T, pp. 2 and 5 (Exhibit EU-187).

²⁸¹ Task NNL12AB38T, p. 2 (Exhibit USA-65)

²⁸² *List of NASA technical reports* (Exhibit US-27).

²⁸³ Contract NND07AA08B, SOW, p. 1 (Exhibit USA-66).

²⁸⁴ Task NND07BO02T, pp. 1 and SOW (Exhibit USA-67(HSBI)).

²⁸⁵ Task NND07BO03T, pp. 1 and 5 (Exhibit USA-68(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 56

- Conduct a technical interchange meeting;²⁸⁶
- Provide test pilot evaluation of intelligent flight control system on NASA flight simulator;²⁸⁷
- Activate 1553 Bus communication in research flight control system [[HSBI]],²⁸⁸
- Test the F/A-18's research flight control system following removal of [[HSBI]] modifications to the aircraft;²⁸⁹
- [[HSBI]];²⁹⁰
- [[HSBI]];²⁹¹ and
- Manage work under all of the other tasks.²⁹²

Most of the payments came from Aviation Safety, but there were small payments from Fundamental Aeronautics, CASP, and the ESMD as well.²⁹³

161. As these summaries show, work under this BOA was directed not at paying Boeing to conduct research, but at maintaining and improving NASA's F/A-18 so that it could adequately perform experimental tasks necessary for NASA's other work. The mechanical tasks of adding and removing test equipment and modifications would teach Boeing nothing that it did not already know from other work. Therefore, this contract has no relevance to the EU's claims.

Aviation Safety BOA: [BCI]

162. NASA entered into Contract NNL10AA04T with Boeing to expedite and realize economies in contracting by minimizing repetitive efforts that might otherwise arise from the multiple rounds of contracting engendered by the NRAs.²⁹⁴ It provided a set of standard terms, including standard provisions on data rights, standard provisions on rights in inventions, and the standard rule that government property would only be furnished if specifically listed in the

²⁸⁶ Task NND07BO05T, p. 1 (Exhibit USA-70(HSBI)).

²⁸⁷ Task NND08BO07T, pp. 1-2 (Exhibit USA-70(HSBI)).

²⁸⁸ Task NND07AA09T, Modification 1, p. 2, frame 6/32 (Exhibit USA-71(HSBI)).

²⁸⁹ Task NND08BO10T, pp. 1-2 (Exhibit USA-72(HSBI)).

²⁹⁰ Task NND08BO12T, Attachment A (Exhibit USA-73(HSBI)).

²⁹¹ Task NND10BO13T, SOW, p. 1 (Exhibit USA-74(HSBI)).

²⁹² Task NND07BO01T, Attachment A (Exhibit USA-75(HSBI)).

²⁹³ *Obligations under NASA contracts with Boeing, FY2007-FY-2012* (Exhibit USA-37(BCI)).

²⁹⁴ Contract NNL10AA0B, pp. 5 and 28 (Exhibit USA-76).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 57

relevant task. The Aviation Safety Program funded approximately \$800,000 in research with Boeing under this BOA, through two tasks.

163. The first of these, Task NNL10AA04T, arose from a proposal Boeing submitted in response to the 2009 NRA. Its objective was to design and demonstrate a vehicle-level reasoning system to protect systems and components against failures and malfunctions.²⁹⁵ The second, NNL10AB34T, funded research into detecting flaws in aircraft structures.²⁹⁶ Both tasks had standard data and patent rights clauses. Neither provided for government furnished property.

164. It should be obvious that finding ways to protect aircraft from failure has advantages far beyond Boeing, which extend into the use by air transportation suppliers to evaluate whether aircraft are safe to fly.

Other contracts

165. Contract NND08AA66C sought to identify damage caused in battle to military aircraft or accidental failure of civil aircraft structures and use control systems to prevent further damage so as to permit safe landing.²⁹⁷ This contract did not provide for use of government facilities or equipment. Contract NND11AQ73C provided for research to integrate UAVs into NextGen.²⁹⁸ Under Contract NNC06CB71C, Glenn Research Center hired Boeing [[HSBI]].²⁹⁹ Government furnished property consisted primarily [[HSBI]], which was not for Boeing's use.³⁰⁰ These contracts had standard data and patent clauses.

166. The Aviation Safety Program also funded a single task, NNL11AB51T, under NNL10AA05B, a BOA otherwise associated with the Integrated Systems Research Program. This task sought to develop a universal standard procedure for evaluating lightning strike protection, which would ensure compatibility of data developed over multiple studies.³⁰¹ The final report on this work has not yet been assigned an identification number.³⁰² However, this effort will have obvious utility throughout the aeronautics community, including in air traffic control.

²⁹⁵ Task NNL10AA04T, p. 15 (Exhibit USA-77(BCI))

²⁹⁶ Task NNL10AB34T, p. 13 (Exhibit EU-183).

²⁹⁷ Contract NND08AA66C, Attachment A, p. 1 (Exhibit EU-186).

²⁹⁸ *List of FY2007-FY2012 NASA contracts* (Exhibit USA-37(BCI)).

²⁹⁹ Contract NNC06CB71C, Attachment A, p. 1 (Exhibit USA-78(HSBI)).

³⁰⁰ Contract NNC06CB71C, Attachment D (Exhibit USA-78(HSBI)). The contract did not convey title to Boeing, but rather gave Boeing possession while [[HSBI]] was under way. Therefore, the [[HSBI]] should not be considered as having been "provided" to Boeing as a financial contribution. Contract NND11AQ73C provided neither facilities nor employees.

³⁰¹ Task NNL11AB51T, pp. 2-3 (Exhibit USA-79(BCI)).

³⁰² *List of NASA technical reports* (Exhibit EU-214).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 58

*SAA*s

167. NASA funded six SAAs through the Aviation Safety Program. The biggest commitment was [BCI] under SAA1-757, Annex 2, in which Boeing and NASA undertook to [BCI].³⁰³ [BCI]³⁰⁴ SAA1-757, Annex 12, continued this work, resulting in NASA incurring an additional [BCI] in costs.³⁰⁵ This SAA has special intellectual property terms, under which any invention made during this work would be the property of the employer of the individual who invented it. In the case of inventions by employees of multiple entities, all would share ownership. If invention by a NASA employee resulted in the agency having sole ownership of an invention, Boeing would have the right to negotiate a royalty-bearing, non-exclusive license.³⁰⁶

168. Other SAAs funded through the Aviation Safety Program provided for:

- [BCI],³⁰⁷
- [BCI],³⁰⁸
- [BCI],³⁰⁹
- [BCI],³¹⁰ and
- [BCI]³¹¹

These SAAs were either under SAA1-757, or had similar patent rights provisions. SAA1-1155 references a determination that section 305(b) of the Space Act, which gives the NASA Administrator title to all inventions developed with NASA funding or resources, does not apply and, therefore, “title to inventions made (conceived or first actually reduced to practice) as a result of activities performed under this Agreement will remain with the respective inventing

³⁰³ SAA1-757, Annex 2, pp. 3-4 (Exhibit USA-80(BCI)).

³⁰⁴ SAA1-757, Annex 2, p. 3 (Exhibit USA-80(BCI)).

³⁰⁵ SAA1-757, Annex 12 (Exhibit USA-81(BCI)).

³⁰⁶ SAA1-757, pp. 6-7 (Exhibit USA-82(BCI)).

³⁰⁷ SAA1-1155, Annex 2, p. 1 (Exhibit EU-191(BCI)).

³⁰⁸ SAA1-1155, Annex 3, pp. 1-2 (Exhibit EU-190(BCI)).

³⁰⁹ SAA1-757, Annex 13, p. 1 (Exhibit US-83(BCI)).

³¹⁰ SAA3-848, p. 1 (Exhibit US-84(BCI)). LEWICE is a software package used by hundreds of users in the aeronautics community for predicting ice shapes, collections efficiency, and anti-icing heat requirements. Glenn Research Center, LEWICE (Exhibit USA-85).

³¹¹ SAA3-1255, Annex 1 (Exhibit USA-86(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 59

party(ies), and no invention or patent rights are exchanged between or granted by such parties under this Agreement except as provided herein.”³¹²

169. As with the contracts, the SAAs funded through this program obviously help NASA to advance the public mission of improving the safety of air transportation.

c. Aeronautics Test Program (payments of \$[BCI])

170. The EU alleges that NASA conferred \$408 million in payments, facilities, equipment and employees to Boeing through this program during the 2007-2012 period.³¹³ The real value of payments to Boeing for aeronautics research was \$[BCI]. The EU does not assert that contracts funded under this program resulted in any advantage to Boeing.³¹⁴ However, it does assert that SAAs funded through ATP advanced Boeing’s work regarding blended wing body aircraft and allowed Boeing to use facilities without full reimbursement.³¹⁵ Neither assertion is relevant to this proceeding.

171. ATP is an infrastructure maintenance and development program, and was the smallest of NASA’s aeronautics programs during this period. As NASA explained in the 2006 NRA:

ATP was created to: (1) increase the probability of having the right aeronautical test facilities in place at the right time for NASA’s mission over the long term; (2) operate those aeronautical test facilities in the most effective and efficient manner possible; and (3) ensure intelligent investment in and divestment of facilities.³¹⁶

NASA pursues these objectives through four ATP project areas: (1) Operation support; (2) Facility maintenance; (3) Facility upgrades and test technology; and (4) Facility-related research.³¹⁷

172. NASA formulated the general objectives of this program by evaluating the requirements of NASA mission directorates, the capabilities at NASA centers, and consulting with stakeholders and partner agencies to assess the importance and the need for the agency’s wind tunnel and air breathing propulsion test facilities. ATP developed a portfolio of facilities considered to be important to the agency and the nation, and adopted consistent management processes across the NASA Research Centers related to operations and maintenance of the ATP facilities. NASA also detailed these objectives in the 2006 NRA, and invited “all categories of U.S. and non-U.S. organizations, including educational institutions, industry, and not-for-profit

³¹² SAA1-1155, p. 8 (Exhibit USA-87(BCI)).

³¹³ EU FWS, para. 56, figure 1.

³¹⁴ EU FWS, paras. 131-134.

³¹⁵ EU FWS, paras. 133-134.

³¹⁶ 2006 NRA, p. D-1 (Exhibit USA-21).

³¹⁷ 2006 NRA, p. D-2 (Exhibit USA-21).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 60

institutions” to submit proposals.³¹⁸ The 2006 NRA sought research proposals exclusively for the last ATP project, facility-related research, to “solve fundamental problems by novel means in areas such as facility characterization, simulation of test conditions, or test techniques and to foster the development of future researchers in the techniques of large scale aeronautics testing.”³¹⁹

173. The 2006 NRA did not lay out any evaluation factors, but indicated instead that solicitations “will be forthcoming.”³²⁰ Over the 2007-2012 period, NASA funded four contracts through ATP.³²¹ Contract NNC08CA47C, which addressed applied combustion concepts, was funded primarily by [BCI] from Fundamental Aeronautics, with ATP providing [BCI].³²² The Statement of Work for that contract is classified. Contract NNC08CA70C addressed advanced materials, and received [BCI] from ATP and [BCI] from CASP.³²³ The only government facilities or equipment made available under this contract was a [BCI] worth \$[BCI].³²⁴ The Statement of Work for this contract is classified.³²⁵

174. NASA also entered into several partially reimbursable and nonreimbursable SAAs with Boeing under this program. Most were for relatively small amounts, the one exception being Annex 24 of SAA1-588, for use by Boeing of the Langley National Transonic Facility. Boeing agreed to pay NASA [BCI] and provide access to Boeing’s proprietary data, while NASA agreed to pay for a portion of the costs of tunnel occupancy and all of the liquid nitrogen used, for an estimated contribution of [BCI].³²⁶ Other SAAs also provided cost sharing between NASA and Boeing with regard to use of certain NASA test facilities. The total of all ATP funding of SAAs with Boeing was approximately \$[BCI].³²⁷

175. The EU notes NASA statements that the ATP was “supporting” Boeing’s work on the X-48B” and that agency facilities were [BCI]³²⁸ But, given that these were SAAs that, under the

³¹⁸ 2006 NRA, p. 4 (Exhibit USA-21).

³¹⁹ 2006 NRA, p. D-3 (Exhibit USA-21).

³²⁰ 2006 NRA, p. D-2 (Exhibit USA-21).

³²¹ Of these four, one received relatively minor amounts through ATP: \$[BCI] for NNC08CA93C. *Obligations under NASA contracts with Boeing* (USA-37(BCI)).

³²² *Obligations under NASA contracts with Boeing* (USA-37(BCI)). This contract had government furnished property. Contract NNC08CA47C, p. 17 (Exhibit USA-88(HSBI)). We address that issue with the discussion of the Fundamental Aeronautics Program, which accounted for the majority of spending under this contract.

³²³ Contract NNC08CA70C, p. 1 (Exhibit USA-89(BCI)).

³²⁴ Contract NNC08CA70C, Attachment B (Exhibit USA-89(BCI)).

³²⁵ Contract NNC08CA70C, frame 1/73 (Exhibit USA-89(BCI)).

³²⁶ SAA1-588, Annex 24, p. 2 (Exhibit USA-90(BCI)); NASA SAA List (Exhibit USA-60(BCI)).

³²⁷ NASA SAA List (Exhibit USA-60(BCI)).

³²⁸ EU FWS, paras. 132-133, *quoting* NASAfacts: Aeronautics Test Program (Exhibit EU-195) and SAA1-757, Annex 16, p. 1 (Exhibit EU-198).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 61

Appellate Body’s rubric are “akin to a species of joint venture,” the fact that research benefits both parties is a given. In any event, at the amounts under the ATP, any “support” was minimal in relation to Boeing’s own research expenses. Access to facilities is in no way the result of any subsidy because Boeing can, and often does, pay full price for using NASA wind tunnels and computers through fully reimbursable SAAs. Airbus also has use of these facilities *on the same terms* as Boeing does, and actually made use of them during the 2007-2012 period.

176. What the EU fails to recognize is that NASA only waives reimbursement under an SAA when the private party brings something to the agreement that is useful to NASA’s mission. That may take the form of data that NASA could not otherwise obtain or contribution of consumables, [**BCI**].

*d. Integrated Systems Research Program (payments of \$[**BCI**])*

177. The EU alleges that NASA conferred \$173 million in payments, facilities, equipment and employees to Boeing through this program during the 2007-2012 period.³²⁹ The real value of payments to Boeing for aeronautics research was \$[**BCI**].

178. NASA created the Integrated Systems Research Program in 2010 to address the concern that {a}s the number of flight operations at many of the largest airports in the Nation continues to increase, environmental concerns over noise and emissions will limit the capability of those airports, and therefore limit the capability of the entire system.”³³⁰ The initial focus of this effort was “development of new vehicle concepts and enabling technologies that will simultaneously reduce fuel burn, noise and emissions.”³³¹ NASA executes this objective through the Environmentally Responsible Aviation Project, which “will take an integrated system-level approach to reduce the environmental impact of aviation (in terms of noise, local and global emissions, and local air quality) in the area of air vehicle technologies.”³³²

179. The agency used an NRA in 2010 “to solicit innovative proposals in key research areas that complement NASA expertise.”³³³ It instructed offerors to provide unlimited government use rights for all results of any project.³³⁴ NASA evaluated proposals based on four factors:

- (1) Relevance to NASA’s objectives, as laid out in the NRA (weighted 20 percent);
- (2) Technical merit (weighted 35 percent), including the merit of the proposal and the various capabilities of the proposer;

³²⁹ EU FWS, para. 56, figure 1.

³³⁰ NASA 2010 Budget, p. AERO-39 (Exhibit USA-92).

³³¹ NASA 2010 Budget, p. AERO-2 (Exhibit USA-92).

³³² NASA 2010 Budget, p. AERO-39 (Exhibit USA-92).

³³³ NASA 2010 Budget, p. AERO-41 (Exhibit USA-92).

³³⁴ NRA NNH10ZEA001N (June 2, 2010, as amended), p. D-36 (Exhibit USA-93).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 62

- (3) Effectiveness of the work plan (weighted 20 percent), in terms of its comprehensiveness, measurable metrics, and results to be publically available after completion of the work; and
- (4) Qualifications of the proposed team.³³⁵

As with the Fundamental Aeronautics Program, all proposals were subject first to peer review with regard to these factors, and then to evaluation by NASA officials to ensure the awards covered all program areas and had a cost within available funding limits.

180. Boeing received payments under ISRP through six instruments: Contract NNL10AA05B (the “ISRP BOA”), Contract NND1AG03C, Purchase Order NNC11QA17P, Purchase Order NNC11VA99P, and Purchase Order NND11VA99P.

ISRP BOA: \$[BCI]³³⁶

181. The ISRP BOA provided a framework for ordering tasks to perform research on structures, materials, aerodynamics, aerothermodynamics, and acoustics technology for aerospace vehicles.³³⁷ The contract required Boeing to provide all resources to carry out the work except, as was expressly stated in the contract.³³⁸ It provided standard data use rights, with provisions for limited use data and a special clause for software developed under any of the tasks, and standard rights to any inventions.³³⁹ NASA subsequently modified the agreement to provide for the possibility of funding through the American Recovery and Reinvestment Act, which included heightened requirements on transparency regarding the spending of government funds.³⁴⁰

182. The largest task under this BOA, Task NNL11AA68T, provided [BCI] for the construction of a large-scale test article to evaluate how composites prepared using PRSEUS would bear the loads characteristic of a hybrid wing body (“HWB”) aircraft in the NASA Combined Loads Test System (“COLTS”).³⁴¹ This task built on data and test results relating to composites for shaped vehicles and HWB design, generated under two FAP

³³⁵ NRA NNH10ZEA001N (June 2, 2010, as amended), pp. D-39 – D-40 (Exhibit USA-93).

³³⁶ The 2010 BOA also included tasks funded through the Airspace Program, which the EU is not challenging, and the Aviation Safety and Fundamental Aeronautics Programs, which are discussed in relation to those programs.

³³⁷ Contract NNL10AA05B, p. 2 (Exhibit USA-94).

³³⁸ ISRP BOA, pp. 2 and 14 (Exhibit USA-94).

³³⁹ Contract NNL10AA05B, pp. 30-31 and 39 (Exhibit USA-94).

³⁴⁰ Contract NNL10AA05B, Modification 1, p. 2 (Exhibit USA-94, frame 44/49).

³⁴¹ Task NNL11AA68T, Modification 4, SOW, p. 4 (Exhibit EU-165).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 63

contracts.³⁴² Government-furnished property worth \$852,000, conveyed under the two FAP contracts, was transferred to this task.³⁴³ Boeing is required to deliver the results in the form of a report with unlimited data rights when the work is complete.³⁴⁴

183. Another major task under this BOA, Task NNL11AB93T, provided [**BCI**] to test a concept for reducing noise generated by engine nozzles developed under Task NNL05AD23T, on a more powerful engine.³⁴⁵ All data delivered under the task order was subject to unlimited data rights, with the exception of certain data developed at Boeing's own expense.³⁴⁶ Government furnished property was limited to a \$2,000 [**BCI**].³⁴⁷ Boeing is required to deliver the results in the form of a report when the work is complete.³⁴⁸

184. The remaining ISRP tasks under the 2010 BOA involved substantially smaller payments and more limited research:

- [**BCI**] to analyze concept for integrating an open rotor engine into a BWB, with potential reductions in fuel burn and noise levels,³⁴⁹
- [**BCI**] to design and fabricate a PRSEUS test panel for testing in Langley Research Center's Structural Acoustics Loads and Transmission facility to determine noise radiation behavior,³⁵⁰
- [**BCI**] to evaluate the use of active flow control to reduce the vertical tail size of a large commercial aircraft, thereby cutting fuel consumption,³⁵¹ and
- [**BCI**] to perform wind tunnel testing originally planned under Contract NNL70AA54C, but which remained unfinished when the period for performing that contract expired.³⁵²

³⁴² Task NNL11AA68T, Modification 4, SOW, p. 4 (Exhibit EU-165, frame 32/47), *citing* Contract NNL07AA48C and Task NNL10AB00T.

³⁴³ Task NNL11AA68T, Modification 4, SOW, pp. 13-14 (Exhibit EU-165, frames 41-42).

³⁴⁴ Task NNL11AA68T, Modification 4, SOW, p. 10 (Exhibit EU-165, frame 38).

³⁴⁵ Task NNL11AB93T, p. 2 (Exhibit EU-159).

³⁴⁶ Task NNL11AB93T, p. 14 (Exhibit EU-159).

³⁴⁷ Task NNL11AB93T, p. 13 (Exhibit EU-159).

³⁴⁸ Task NNL11AB93T, p. 10 (Exhibit EU-159).

³⁴⁹ Task NNL10AC78T, p. 2 (Exhibit EU-163).

³⁵⁰ Task NNL10AD07T, p. 2 (Exhibit USA-96(HSBI)) (USA13-117).

³⁵¹ NNL10AD24T, p. 2 (Exhibit USA-97) (USA13-119).

³⁵² Task NNL11AC16T, p. 3 (Exhibit EU-158)

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 64

185. The final reports for the first two tasks have been published and are available from NASA's on-line library.³⁵³ The third task was still active at the end of the data gathering period, so no final report has been provided.³⁵⁴ The fourth task did not call for a final report, as it was merely completing testing related to Contract NNL07AA54C, which produced a releasable final report.³⁵⁵ The only government furnished property for these tasks was a stitching tool and cure tool worth that were transferred to Task NNL11AA68T.³⁵⁶ As we included their value with the value of that task, treating them as a separate provision for this contract would result in double-counting.

Contract NND11AG03C

186. Based on Boeing's response to the 2010 NRA, NASA awarded Boeing this contract to project the needs and capacities of the air transportation system in 2025, identify an aircraft configuration for entry into service at that time that would operate efficiently in that system, and map out technological development needed to achieve that goal. The contract also called for the design (but not production) of a test vehicle for evaluation of the technology concepts.³⁵⁷ Standard rights in inventions apply. Boeing may assert copyright over scientific and technical articles based on data developed under the contract, and NASA has limited rights with respect to data developed at Boeing's expense. NASA otherwise has unlimited rights in data developed under the contract, and even limited rights data is, for the most part, subject to release within five years.³⁵⁸ NASA neither furnished to government property nor provided access to government facilities.

Purchase orders

187. NASA also used ISRP funds to pay for a small number of purchases of commercial, open-market items from Boeing :

³⁵³ *List of NASA Technical Reports* (Exhibit USA-27).

³⁵⁴ *List of NASA Technical Reports* (Exhibit USA-27).

³⁵⁵ *List of NASA Technical Reports* (Exhibit USA-27); Contract NNL07AA54C, Exhibit B, p. 5 (Exhibit USA-106(HSBI), frame 39/167).

³⁵⁶ Task NNL10AC78T, p. 8 (Exhibit EU-163); Task NNL10AD07T, Modification 2, p. 2 (Exhibit USA-96(HSBI), frame 12/13); Task NNL10AD24T, p. 8 (Exhibit USA-97); Task NNL11AC16T, p. 8 (Exhibit EU-158).

³⁵⁷ Contract NND11AG03C, SOW, p. 1 (Exhibit EU-176, frame 31).

³⁵⁸ Contract NND11AG03C, pp. 14-16; Exhibit 1 (Exhibit EU-176). The EU asserts that this clause is similar to the Limited Exclusive Rights Data clauses used in certain contracts in the 1990s. The clause was inserted into the contract several years ago near the outset of the new program formulation on an exceptional basis, and is not representative of standard practice. NASA Headquarters has since that time clarified NASA policies in this area, and instituted the necessary review processes to ensure adherence to NASA policy

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 65

- ceramic matrix composite sandwich structure test coupons for [[**HSBI**]];³⁵⁹
- ceramic matrix composite sandwich structures for exhaust systems for [[**HSBI**]];³⁶⁰ and
- an additional order of ceramic matrix composite sandwich structures for [[**HSBI**]].³⁶¹

These were open market, commercial transactions that did not involve any research on Boeing's part or the provision of facilities, equipment, or employees to Boeing. Therefore, it is not within this Panel's terms of reference.

SAA's

188. Langley Research Center funded five SAA's with Boeing through the Integrated Systems Research Program. Four of these were annexes to umbrella SAA1-1018, which was directed to conducting studies related to the ERA project.³⁶² Under the umbrella SAA, if either party developed data considered proprietary, NASA committed to maintain the data in confidence for five years, expressly subject to public release afterward.³⁶³ Based on a determination that Article 305 of the Space Act did not apply, the agreement did not provide for the transfer of patent rights between the parties. Thus, title to any invention would remain with the inventing party, and title to joint inventions would be shared jointly.³⁶⁴ Boeing reserved the right to license any patents developed by NASA employees under the SAA, subject to license terms to be agreed between the parties.

189. The annex with the largest value was SAA1-1018, Annex 1, under which NASA incurred [**BCI**] in costs for [**BCI**].³⁶⁵ Boeing undertook to [**BCI**], which NASA would then test with a view to documenting the test and analysis "through internal reports and presentations,

³⁵⁹ Purchase Order NNC11QA17P, pp. 1 and 18 (Exhibit USA-98(HSBI)). This instrument was mistakenly included in the U.S. response to the Panel's Article 13 request for information.

³⁶⁰ This purchase was pursuant to Purchase Order NNC11VA84P, which was not responsive to the Panel's Article 13 request for information.

³⁶¹ Purchase Order NNC11VA99P, p. 2 (Exhibit USA-99(HSBI)). This instrument was mistakenly included in the U.S. response to the Panel's Article 13 request for information.

³⁶² SAA1-1018, p. 1 (Exhibit USA-100(BCI)).

³⁶³ SAA1-1018, p. 5 (Exhibit USA-100(BCI)).

³⁶⁴ SAA1-1018, p. 9 (Exhibit USA-100(BCI)).

³⁶⁵ *NASA SAA's with Boeing* (Exhibit USA-(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 66

NASA publications, conference papers, and/or journal articles.”³⁶⁶ This annex did not involve the exchange of background data, prior developed proprietary data, or software by either party.³⁶⁷

190. Under Annex 2 to SAA1-1018, NASA incurred [BCI] in costs related to the [BCI].³⁶⁸ The agreement involved Boeing’s provision of background data developed using its own funds, which NASA committed to protect.³⁶⁹

191. Subsequent annexes had incurred much lower costs by the end of the data collection period. Annex 3 involved [BCI] in costs for [BCI].³⁷⁰ Annex 6 involved [BCI] in costs related to the development of [BCI].³⁷¹

e. Aeronautics Strategy and Management Program (no payments)

192. This program did not fund any payments, or provide facilities, equipment, or employees, to Boeing for non-engine aeronautics research.

f. Strategic Capabilities Assets Program (no payments for research)

193. The Strategic Capabilities Assets Program manages specialized assets and skills for NASA’s missions, including thermal vacuum chambers, simulators, and the Arc Jet Facility, and coordinates on general infrastructure policy with the Aeronautics Test Program which is responsible for managing the agency’s large scale wind tunnels used in NASA’s aeronautics research programs.³⁷² Boeing received only one contract under this program related to aeronautics research, [BCI].³⁷³ This was an open market, commercial transaction that did not involve any research on Boeing’s part or the provision of facilities, equipment, or employees to Boeing. Therefore, it is not within this Panel’s terms of reference, which covers only NASA “funding and access to government facilities, equipment, and employees *for R&D* applicable to the development, design, and production of LCA.”³⁷⁴

³⁶⁶ SAA1-1018, Annex 1, pp. 1-2 (Exhibit USA-101(BCI)).

³⁶⁷ SAA1-1018, Annex 1, p. 3 (Exhibit USA-101(BCI)).

³⁶⁸ SAA1-1018, Annex 2, pp. 1-2 (Exhibit USA-104(BCI)).

³⁶⁹ SAA1-1018, Annex 2, p. 3 (Exhibit USA-104(BCI)).

³⁷⁰ SAA1-1018, Annex 3, p. 1 (Exhibit EU-161(BCI)); NASA SAA List (Exhibit USA-60(BCI)).

³⁷¹ SAA1-1018, Annex 6, p. 1 (Exhibit USA-0102(BCI)) (USA13-161); NASA SAA List (Exhibit USA-60(BCI)).

³⁷² NASA 2007 Budget, p. SAE CASP 1-4 (Exhibit USA-13).

³⁷³ Contract NNL12AA55P (Exhibit USA-103).

³⁷⁴ EU Panel Request, WT/DS353/18, para. 8 (12 Oct. 2012).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 67

g. High-end Computing Program (no payments)

194. This program did not fund any payments, or provide facilities, equipment, or employees, to Boeing for non-engine aeronautics research. In fact, Boeing does not use NASA computers extensively for aeronautics research. NASA records show that Boeing's use of NASA computers had a total cost of [BCI] during the 2007-2012 period, most of it related to hypersonic flight,³⁷⁵ which is not a speed range even theoretically under consideration for large commercial aircraft.

195. Any use by Boeing of NASA computer facilities would be reflected elsewhere. Requests to use NASA's High End Computing Capability (HECC) can only be made by NASA principal investigators (PIs). Accounts are to be used only for the purpose for which they are authorized and are not to be used for non-NASA related activities. Therefore, there is no need to take account of this program in attempting to identify or value the provision of computer facilities to Boeing.

h. Cross-Agency Support Programs

196. With the exception of the Strategic Capabilities Assets Program, the EU has not challenged the Cross-Agency Support Programs, which include NASA's Education, Advanced Business Systems, and Innovative Business Partnership.³⁷⁶ Approximately \$[BCI] in payments to Boeing from the four aeronautics research centers were funded through CASP. In some cases, those payments provided additional funding for contracts that also received funding through other programs. In the case of a contract partially funded through a program challenged by the EU, CASP funding should not be considered part of any financial contribution.³⁷⁷ Contracts funded entirely through CASP are not part of the financial contribution challenged by the EU, and not covered by the Panel's terms of reference.³⁷⁸

i. Facilities, equipment, and employees provided through NASA contracts and SAAs are much less valuable than alleged by the EU.

197. The discussion above of NASA-Boeing transactions funded during the FY2007-FY2012 period by the aeronautics research programs challenged by the EU demonstrated that payments under those instruments are vastly lower than the total value alleged by the EU. Provision of facilities, equipment, and employees is also small.

³⁷⁵ *Boeing use of NASA computers, 2007-2012* (Exhibit USA-270).

³⁷⁶ NASA 2007 Budget, SAE CASP 1-2 (Exhibit USA-13).

³⁷⁷ Contracts funded by CASP and one of the programs challenged by the EU include NNC08CA47C (also ATP and FAP); NNC08CA70C (also ATP); NNC09CA32C (also FAP); NNC10AA02A (also FAP); NNC11CA12C (also FAP); NNC11CA20C (also FAP); NND07BO01T (also Aviation Safety); NND08AA66C (also Aviation Safety).

³⁷⁸ Contracts through the four aeronautics research centers that were wholly funded through CASP include: NNC10AA03A.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 68

198. Under the SAAs funded through these programs, NASA waived approximately \$[BCI] in reimbursement for facilities, equipment, and employees provided by NASA to the common research effort.³⁷⁹

199. The United States has compiled a table of all of the government furnished property listed in the contracts funded through the programs challenged by the EU, yielding a value for equipment of \$[BCI].

200. NASA contracts with Boeing did not provide for extensive usage of facilities. Use of NASA computers by Boeing for work on NASA contracts had a value of approximately [BCI] in the 2007-2012 period.

201. During this period, NASA's declining budget situation meant that employees spent less time assisting contractors with contract-related activities. There are three basic types of staff activity. Contract specialists are responsible for the administration and management aspects of the specific contract, such as negotiating the financial and other terms of the contract, monitoring the flow of obligations and disbursements and making sure the contract documents are in order. Technical monitors are responsible for evaluating whether the contractor is performing the specified work, determining whether a task is complete, and assessing whether the final report, if one is required, is complete and meets the stated objectives. NRA managers generally coordinate operational aspects of the NRA process at a center, such as organizing logistics for reviews, gathering input from technical leads, publishing responses, and documenting/publishing NRAs.

202. The amounts of time for these activities varied from center to center:

- Langley Research Center, which handled the majority of the contracts with Boeing uses a formula for budgeting purposes estimating the following usage of staff time for each contract:
 - for indefinite delivery/indefinite quantity contracts, 0.4 FTE³⁸⁰ for contract specialists and 0.2 FTE for technical monitors per contract per year;
 - for basic ordering agreements, 0.3 FTE for contract specialists and 0.1 FTE for technical monitors; and
 - 2 FTE each year for management of awards under NRAs.
- Dryden Flight Research Center estimate that its employee time devoted to contracts is the same as at Langley Research Center.

³⁷⁹ NASA SAAs with Boeing (USA-60(BCI)).

³⁸⁰ "FTE" stands for "full-time equivalent," meaning one person employed for a full year.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 69

- Glenn Research Center estimates that on average, 0.1 FTE per year per contract or cooperative agreement is devoted to technical monitor or contract specialist responsibilities. Management of NRA awards took 3 FTE from 2006-2010, and 1.5 FTE from 2010-2012.
- Ames Research Center estimates 0.2 FTE per contract for contract specialists and 0.2 FTE for technical monitors per contract per year.

In 2012, NASA budgeted an FTE as \$150,000.³⁸¹

j. The EU’s methodology for valuing the subsidy to Boeing grossly overstates the amount of any financial contribution.

203. As the previous analysis shows, the EU’s methodology for valuing the financial contribution to Boeing overstates the true values many times over. This is because, in preparing its submission, the EU used the same valuation methodology it used in the original proceedings, which overstated the amount by *four times* the largest possible actual value.³⁸² (The amount referenced by the Panel in its report was the outside limit of the value of research activities covered by the EU claims,³⁸³ as it includes research on space travel and other topics that the EU excluded as not relevant to its claims.³⁸⁴) The EU asserts that its inflated estimate represents the “best available evidence of the value of the payments and access to NASA facilities, equipment and employees” and seeks to blame the United States for not providing information needed to conduct the proper calculation.³⁸⁵ However, as the EU does not identify any request for information that the United States has not answered in this regard, it is impossible to place any credence in the EU excuse. In any event, even in the absence of information identical to that used by the original panel, there are any number of adjustments that a party interested in accuracy could have made to compensate for the known massive upward bias of the EU’s approach. The EU’s failure to make such an adjustment demonstrates a complete disregard for accuracy, and calls into question the EU’s interest in putting forward an estimate that the Panel could rely upon.

³⁸¹ Statement of Jon Montgomery (Exhibit USA-95).

³⁸² *Compare US – Large Civil Aircraft (Panel)*, para. 7.1059 (“The European Communities estimates that NASA provided \$10.4 billion in subsidies to Boeing over the period 1989-2006”) *with ibid.*, para. 7.1110 (“the amount of the subsidy to Boeing’s LCA division is \$2.6 billion over the period 1989-2006”).

³⁸³ *US – Large Civil Aircraft (Panel)*, para. 7.1068, notes 2607 and 2609.

³⁸⁴ The Appellate Body noted that the United States proposed a “third step” in the valuation exercise of “eliminating the contracts that . . . NASA had identified as not pertaining to aeronautics research.” The Appellate Body stated that the Panel “should have explained why it disagreed with the third step or why it did not find it probative: for instance, because the results of the manual review, by NASA personnel, of the descriptions of the research conducted under each Boeing contract awarded by the four research centres could not be verified.” *US – Large Civil Aircraft (AB)*, para. 695.

³⁸⁵ EU FWS, para. 179.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

k. *The EU gets critical facts wrong in its discussion of intellectual property rights arising as a result of work under NASA contracts and SAAs.*

204. As the EU notes in its first written submission, work under a U.S. government contract may result in the generation of intellectual property, most commonly in the form of written or mathematical data.³⁸⁶ Much more rarely, work under a contract will result in a patentable invention. In highly limited circumstances, a Boeing employee may develop something that qualifies as a trade secret. Like most commercial research transactions, U.S. government contracts provide for rights in these forms of intellectual property, to the extent they result from activities funded through the contract. The EU discusses several forms of intellectual property developed under contracts and SAAs funded through the challenged NASA programs. It has many of the facts wrong.

205. Based on a search of the U.S. Patent and Trademark Office database, the EU notes that some Boeing patents confer rights on the government indicating that the underlying invention was invented during work funded under a NASA contract.³⁸⁷ It asserts that these “were developed pursuant to the NASA aeronautics R&D programmes at issue before the original panel and/or at issue before this compliance panel.”³⁸⁸ The EU is mistaken with respect to a number of these patents because the contracts under which they were developed were issued by NASA research centers that do not conduct aeronautics research and do not receive funding from ARMD or the NASA aeronautics research programs. These are:

Patent	Contract	NASA research center
6,920,790	NCC8-39	Marshall Space Flight Center
5,971,252	NCC8-79	Marshall Space Flight Center
7,742,854	NAS10-02007	Kennedy Space Center

Thus, these patents cannot be considered to be a financial contribution or an effect of the aeronautics research challenged by the EU. They indicate instead that there are a myriad of ways in which Boeing develops intellectual property.

206. The EU notes that the Panel’s request under Article 13 of the DSU included a question regarding practical applications for inventions invented by Boeing employees during work on NASA contracts. The United States responded:

The U.S. government does not possess this information. Boeing informs us that it does not routinely compile information regarding the “practical application” of its inventions. Boeing’s patents are all published, and thus available to the public, and Boeing informs us that its general policy is to license its subject inventions on

³⁸⁶ EU FWS, para. 141.

³⁸⁷ EU FWS, paras. 151-168.

³⁸⁸ EU FWS, para. 150.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 71

reasonable terms to anyone who seeks such a license, and to allow the practice of inventions disclosed by publication of its patents.³⁸⁹

The EU describes this answer as “non-cooperation” and asserts that, as a result, the Panel should “accept the European Union’s understanding of the practical application of the NASA-funded Boeing inventions as the best information available.”³⁹⁰ The EU is wrong on both counts. In its response, the United States provided all of the information available to it with regard to the question and, therefore, cooperated fully. Moreover, the best information as to the uses of those inventions appears in the text of the patents. The EU’s “understanding of the practical application” is argumentation, rather than information, and is entitled to no more weight than the U.S. understanding of practical applications of inventions. The Panel should accordingly examine both arguments to make its assessment.

207. The EU also makes a limited number of points regarding data rights. It first notes that the original panel found that

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.”³⁹¹

This right includes any use whatsoever, for government purposes or for commercial purposes. Thus, the EU is incorrect to assert that the standard rule allows the government to use the data only “for its own purposes.”³⁹²

208. The EU also notes that the Panel asked the following question, suggested by the EU, with regard to technical data: “Please provide a list describing all technical data developed by Boeing, in whole or in part in the course of work performed, or with the use of government facilities, equipment, property, funds, or services of government employees, under each of the programs listed in question 5, from FY 2006 – present.” The United States responded that this information was available in NASA technical reports compiled under most of the contracts, and listed in response to another question.³⁹³ The EU notes that some of the reports are not available

³⁸⁹ Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU, para. 44.

³⁹⁰ EU FWS, para. 150.

³⁹¹ *US – Large Civil Aircraft (Panel)*, para. 7.1300.

³⁹² EU FWS, para. 142.

³⁹³ Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU, para. 41.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 72

yet because they are not complete, or are in the process of review. Others are classified or have limited distribution.³⁹⁴

209. The EU does not allege that this response represents a failure to cooperate,³⁹⁵ but nonetheless asks the Panel to infer from the U.S. response that Boeing (1) “is developing highly valuable LCA-related data through the challenged NASA R&D programmes;” (2) “maintains rights over such data;” and (3) “that much of that data never sees the light of day.”³⁹⁶ None of these inferences are warranted. The U.S. response indicates nothing about the value of the data, or what rights Boeing holds. Any such rights are, in any event, of little value in light of the general U.S. government right to give the data to anyone for any purpose. Nor does this information indicate that NASA data “never sees the light of day.” NASA certainly cannot publish reports it has not received, or reports that have not been reviewed to ensure that they comply with laws regarding the disclosure of export-controlled information. And, while the expansion of its commitment to release information has led to a backlog of information awaiting release, NASA continues to make public large volumes of information.

210. The EU also notes that, on projects involving cost-sharing, technical data may be entitled to protection as a trade secret if it was developed with private funding. Very few of the NASA instruments involved cost sharing and, indeed, the EU makes no particular allegations with regard to trade secrets.

3. In light of changes to NASA practices, post-2006 NASA contracts should be treated as purchases of services and post-2006 SAAs as joint ventures.

211. The Appellate Body has found 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.”³⁹⁷ The panel must “thoroughly scrutinize the measure before it” and “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 {measure}.”³⁹⁸ Such an analysis establishes that post-2006 NASA contracts are purchases of services, which are not a financial contribution, and that post-2006 SAAs are joint ventures.

³⁹⁴ EU FWS, para. 143. The EU notes that the NASA technical reports server was unavailable for public access in March and April, 2013. This was because an employee of a research institute affiliated with NASA illegally removed NASA-owned computer equipment from his offices and attempted to take it out of the country. While it was later discovered that the equipment did not contain sensitive information, the incident suggested the existence of holes in NASA’s information security procedures that required immediate attention. NASA put the server back on line on May 8, 2013, as quickly as possible after resolving these concerns.

³⁹⁵ EU FWS, para. 143-144.

³⁹⁶ EU FWS, para. 144.

³⁹⁷ *US – Softwood Lumber CVDs (AB)*, para. 52.

³⁹⁸ *US – Large Civil Aircraft (AB)*, para. 586, quoting *China – Auto Parts (AB)*, para.171 (emphasis in original).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 73

212. The EU argues otherwise. However, its entire legal analysis consists of five short paragraphs consisting of a few short quotations from the Appellate Body’s finding in *US – Large Civil Aircraft*, only one citation to evidence, and the conclusory statement that NASA’s post-2006 “payments and other support . . . continue to have these same characteristics.”³⁹⁹ Needless to say, this simplistic approach fails completely to “thoroughly scrutinize the measure” or “identify *all* relevant characteristics.” The EU performs an even more cursory analysis with regard to alleged provisions of goods and services, making a generalized assertion supported by reference to a single SAA.⁴⁰⁰ The EU closes its analysis by asserting that the alleged “transfer of patent and other intellectual property rights” to Boeing is yet *another* financial contribution because patents, trade secrets, and data rights are supposedly “goods.”⁴⁰¹ This last point is particularly egregious because the EU already brought this argument to the Appellate Body and *lost*. Specifically, the Appellate Body assessed the treatment of patent rights under NASA and DoD contracts “on the assumption that the allocation of patent rights is in some respects a self-standing subsidy.”⁴⁰² It upheld the original panel’s finding that, if that were the case, the subsidy was not specific.⁴⁰³ The EU did not even appeal the original panel’s finding that treatment of data rights and trade secrets was not a separate subsidy.⁴⁰⁴ Thus, in raising this issue again, the EU is making a collateral attack on the adopted findings of the original panel and the Appellate Body. In short, with this mass of errors, the EU fails completely to meet its burden of proof with regard to post-2006 transactions.

213. A thorough analysis of all the relevant characteristics of the post-2006 NASA measures would require examining all of the characteristics the Appellate Body identified as relevant to its analysis of the pre-2007 measures and how, if at all, the current measures differ from the earlier measures. In this regard, it is significant that the Appellate Body’s evaluation of NASA and DoD contracts went far beyond the four-sentence “summary” quoted by the EU. As noted above in section III.C.1, the Appellate Body considered all of the following factors:

- “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”⁴⁰⁵
- “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to

³⁹⁹ EU FWS, paras. 171-175.

⁴⁰⁰ EU FWS, para. 176.

⁴⁰¹ EU FWS, para. 177.

⁴⁰² *US – Large Civil Aircraft (AB)*, para. 729.

⁴⁰³ *US – Large Civil Aircraft (AB)*, para. 789 (“proceeding on the Panel’s assumption that the allocation of patent rights is in some respects a self-standing subsidy . . . we do not see a basis to find that such a subsidy is explicitly limited to certain enterprises, and therefore specific within the meaning of Article 2.1(a) of the SCM Agreement.”).

⁴⁰⁴ *US – Large Civil Aircraft (AB)*, para. 727.

⁴⁰⁵ *US – Large Civil Aircraft (AB)*, para. 595.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 74

Boeing under the ACT programme provided for research teams that included NASA employees.”⁴⁰⁶

- “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”⁴⁰⁷
- “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”⁴⁰⁸
- “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”⁴⁰⁹
- LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”⁴¹⁰

The United States will address each of these factors for post-2006 contracts and SAAs, as well as any other relevant factors.

a. Post-2006 SAAs and cooperative agreements should be treated as joint ventures for purposes of the financial contribution analysis.

214. The United States begins with SAAs and cooperative agreements because they share many of the attributes the Appellate Body identified as supporting the conclusion that NASA contracts operated as joint ventures. SAAs typically involve the pooling of non-monetary resources, and sometimes payments from Boeing to NASA. Access to NASA facilities and equipment is fairly standard under SAAs. Although LERD clauses are gone, Boeing does get an opportunity to exploit technology resulting from these agreements. For its part, the EU pays little attention to SAAs and cooperative agreements in its analysis, mentioning SAAs solely as one vehicle through which NASA provides goods and services to Boeing, and mentioning cooperative agreements not at all. However, under the Appellate Body’s reasoning, they are the “transaction” that must be addressed in the analysis.

215. **Pooling of non-monetary resources.** The pooling of non-monetary resources is, literally, the defining characteristic of the partially reimbursable and non-reimbursable SAAs that this proceeding covers. Accordingly, the earliest clauses of a typical SAA will lay out each

⁴⁰⁶ *US – Large Civil Aircraft (AB)*, para. 594.

⁴⁰⁷ *US – Large Civil Aircraft (AB)*, para. 595.

⁴⁰⁸ *US – Large Civil Aircraft (AB)*, para. 595.

⁴⁰⁹ *US – Large Civil Aircraft (AB)*, para. 596.

⁴¹⁰ *US – Large Civil Aircraft (AB)*, para. 596

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 75

party's "responsibilities," committing them to take carefully delineated steps toward a common objective.⁴¹¹

216. **Access to NASA facilities and equipment.** Since NASA cannot pay money under an SAA, its contribution almost invariably involves some provision of facilities, equipment, or employees. This is borne out by the SAAs themselves:

- SAA1-1018, Annex 2 provides for Langley Research Center to [BCI].⁴¹²
- SAA1-588, Annex 24 provides for Langley Research Center to conduct wind tunnel tests in exchange for funding and contributions of liquid nitrogen.⁴¹³
- SAA3-1026 provides for Glenn Research Center to [BCI] used by both Boeing and NASA.⁴¹⁴
- SAA1-1126 provides for Langley Research Center to [BCI].⁴¹⁵

217. **The value of such access is typically greater than the payment.** Since NASA cannot pay money under an SAA, the value of the partner's access to facilities, equipment, and employees is invariably greater than the money contributed by NASA.

218. **Ownership of intellectual property and royalties.** Because an SAA typically provides for NASA and the partners to each make separate contributions to the partnership, NASA often determines that an SAA does not trigger section 305(a) of the Space Act, under which NASA takes title to inventions invented during work on NASA contracts. In that case, no invention or patent rights are exchanged by operation of the agreement – NASA owns any patents in inventions made by its employees, and Boeing owns patents in inventions made by its employees.⁴¹⁶ This is in line with U.S. law, which assigns ownership of any patent to the person who invented it. In these situations, the agreement usually gives Boeing the right to negotiate a royalty-bearing license for any invention made by a NASA employee over the course of the work.⁴¹⁷ Each party typically takes the data rights it needs, with NASA maintaining the right to

⁴¹¹ *E.g.*, SAA1-1018, Annex 2, pp. 1-2 (Exhibit USA-0104(BCI)) (USA13-159); SAA1-588, Annex 24, pp. 1-2 and Attachments 1 and 2 (Exhibit EU-201(BCI)); SAA3-1026, pp. 1-2 (Exhibit USA-50(BCI)) (USA13-165); SAA1-757, Annex 2, pp. 3-4 (Exhibit USA-80(BCI), frames 7-8) (USA13-442); SAA1-640, Annex 8, pp. 1-2 (Exhibit USA-56(BCI)) (USA13-440).

⁴¹² SAA1-1018, Annex 2, pp. 1-2 (Exhibit USA-0104(BCI)) (USA13-159).

⁴¹³ SAA1-588, Annex 24, p. 1 (Exhibit EU-201(BCI)).

⁴¹⁴ SAA3-1026, pp. 1-2 (Exhibit USA-50(BCI)) (USA13-165).

⁴¹⁵ SAA1-1126, p. 2 (Exhibit EU-203(BCI)).

⁴¹⁶ *E.g.*, SAA1-1018, p. 9 (Exhibit USA-0100(BCI)) (USA13-275); SAA3-1026, p. 9 (Exhibit USA-50(BCI)) (USA13-165); SAA1-1126, p. 10 (Exhibit EU-203).

⁴¹⁷ *E.g.*, SAA1-1018, p. 9 (Exhibit USA-0100(BCI)) (USA13-275); SAA3-1026, p. 9 (Exhibit USA-50(BCI)) (USA13-165); SAA1-1126, p. 10 (Exhibit EU-203).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 76

publish any data and use data in its other research, while Boeing has the right to preclude release of proprietary information for a fixed period of time.⁴¹⁸

219. **Exclusivity of rights to technology.** SAAs most typically involve the use of NASA facilities as a step in the research process and, accordingly, rarely result in technology in and of themselves.

220. **Treatment under municipal law.** Each SAA contains an “independent relationship” clause stating explicitly that it does not “constitute, create, give effect or otherwise recognize a joint venture, partnership, or formal business organization, or agency agreement of any kind.”⁴¹⁹ However, the characterization of a measure under municipal law is not dispositive of its treatment under the WTO Agreement.⁴²⁰ In any event, the United States does not understand the Appellate Body as having found that the contracts before it actually created joint ventures, but rather that the joint venture provided a useful analog for analytical purposes.

221. Thus, the SAAs should be treated as a joint venture in form, because they have most of the attributes that led the Appellate Body to find certain pre-2007 NASA contracts and DoD agreements to be joint ventures. For those instruments, that conclusion led to the finding that the government contribution was analogous to equity capital covered by Article 1.1(a)(1)(i) of the SCM Agreement. That conclusion does not hold for SAAs because NASA makes only in-kind contributions. There is no “direct transfer of funds” or “potential direct transfer of funds” to trigger application of Article 1.1(a)(1)(i). Therefore, SAAs are best understood as a joint venture comprising a government provision of goods and services.

b. Post-2006 NASA contracts are purchases of services.

222. The United States does not dispute the Appellate Body’s finding that the NASA contracts issued during the original panel’s reference period were akin to equity contributions to joint ventures, and as such a financial contribution under Article 1.1(a)(1)(i). Nor do we dispute that the EU may rely upon that finding in this proceeding with regard to contracts covered by the panel and Appellate Body finding. However, the EU errs in trying to extend that finding to contracts *after* 2006 on the grounds that they “have these same characteristics” as earlier contracts because the characteristics are not the “same.” NASA made extensive changes to its practices for contracting aeronautics research in 2006, which only started to take effect in 2007. The EU should not have overlooked these changes – NASA implemented them in public (in documents cited by the EU), the United States referenced them in its Compliance Notification, and the U.S. Preliminary Response to the Panel’s Article 13 Request described them in detail.

⁴¹⁸ *E.g.*, SAA1-1126, p. 7 (Exhibit EU-203) (proprietary information protected for one year after development); SAA1-757, pp. 3-6 (Exhibit USA-82(BCI)) (USA13-441) (proprietary information protected for five years); SAA3-1026, pp. 4-8 (Exhibit USA-50(BCI)) (USA13-165) (proprietary information protected for two years).

⁴¹⁹ *E.g.*, SAA1-1018, p. 15 (Exhibit USA-0100(BCI)) (USA13-275); SAA3-1026, p. 14 (Exhibit USA-50(BCI)) (USA13-165), SAA1-1126, p. 14 (Exhibit EU-203(BCI)).

⁴²⁰ *US – Large Civil Aircraft (AB)*, para. 586; *citing US – Softwood Lumber IV*, para. 56.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 77

They were extensive. On the procedural side, NASA changed: how it formulated research objectives, how it solicited research contributions from external suppliers, and how it chose which suppliers would do the work. On the substantive side, NASA made a “shift in focus from technology demonstrations to fundamental research.”⁴²¹ It scrapped its largest research program, and dramatically reoriented the projects that continued.

223. In light of these changes, the EU’s assertion that NASA has changed nothing, supported by a single footnote to a single piece of evidence (which the EU misperceives) does not “thoroughly scrutinize the measure” or “identify *all* relevant characteristics of the measure.” It accordingly fails to meet the EU’s burden of proof. A thorough analysis of the evidence, which the United States provides below, establishes that the post-2006 NASA contracts are purchases of services.

224. To begin, most of the findings regarding pre-2007 contracts that led the Appellate Body to characterize them as “akin to a species of joint venture” do not apply to post-2006 contracts.

(a) **Setting research topics**

Finding on pre-2007 contracts: “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”⁴²²

For post-2006 contracts: The four-step approach for the overall reformulation of NASA ARMD’s research programs as described in the NRA section applies to contracts as well. The process begins with the “roadmap” set by each aeronautics research program, based on internal discussions. In Step 2, ARMD seeks information from the supplier community. The centers then draft objectives using the Step 1 roadmaps, and incorporating “feedback” from the suppliers (gathered in Step 2) and other agencies. All decisions were made by the centers (in Step 3) based on their evaluation of the initial roadmaps in light of comments from a multitude of sources, of which Boeing was only one.⁴²³ Thus, there was no longer any “collaborative arrangement” for determining research topics – NASA made the decisions on its own.⁴²⁴

⁴²¹ NASA 2007 Budget, p. SAE ARMD 2-15 (Exhibit USA-13).

⁴²² *US – Large Civil Aircraft (AB)*, para. 595.

⁴²³ NRA NNH06ZNH001 (May 23, 2006) (Exhibit USA-17) (“2006 NRA”).

⁴²⁴ The EU, in its sole citation to evidence, argues that a decisionmaking diagram for the ERA Project (reproduced in paragraph 100 of the EU first written submission) shows that the “precise nature of the R&D is determined collaboratively by NASA and Boeing.” EU FWS, para. 173, note 411. The diagram indicates nothing of the sort. It merely identifies “External Input” and “Prior Research” as considerations in the “Formulation” of the ERA Project. EU FWS, para. 100. Needless to say, “input” is not the same as “determined collaboratively.” In fact, identifying external as one source of “input” into the process merely serves to emphasize that the output of the process – the decision on objectives – was an internal matter.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 78

(b) **Access to facilities, equipment, and employees**

Finding on pre-2007 contracts: “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to Boeing under the ACT programme provided for research teams that included NASA employees.”⁴²⁵

For post-2006 contracts: The value of access to equipment, facilities, and employees included in the post-2006 contracts is far lower than the original panel found for pre-2007 contracts, and the EU has provided no evidence that research teams under post-2006 programs mixed industry and NASA employees.

(c) **Value of access to facilities, equipment, and employees**

Finding on pre-2007 contracts: “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”⁴²⁶

For post-2006 contracts: The EU has not pointed to a single post-2006 contract for which this is the case, and the United States is aware of none.

(d) **Pooling of resources**

Finding on pre-2007 contracts: “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”⁴²⁷

For post-2006 contracts: Most of the contracts do not provide facilities or equipment, and none of them reference the “pooling” of employees. For contracts that do provide facilities or equipment, the amount is generally not large in comparison to the value of the payments.⁴²⁸

(e) **Royalties related to intellectual property**

Finding on pre-2007 contracts: “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly

⁴²⁵ *US – Large Civil Aircraft (AB)*, para. 594.

⁴²⁶ *US – Large Civil Aircraft (AB)*, para. 595.

⁴²⁷ *US – Large Civil Aircraft (AB)*, para. 595.

⁴²⁸ *E.g.*, Contract NNA06BC41C, pp. 1 and 17-18 (Exhibit USA-49(HSBI)) (\$6.6 million payments vs. \$[[HSBI]] in equipment); Contract NNC08CA70C, p. 1 and Attachment B (Exhibit USA-89 (BCI)) (\$2.5 million in payments vs. \$[BCI] in equipment); and Task NNL11AB93T, pp. 1 and 13 (Exhibit EU-157(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 79

undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”⁴²⁹

For post-2006 contracts: This is true for situations in which a Boeing employee working on the contract, or a NASA and Boeing employee working together on the contract, invent an invention. It is not true when a NASA employee working alone invents an invention. In that case, NASA would own any invention, and Boeing would have to pay a royalty to use the invention. Given the absence of pooling of employees, this means that intellectual property rights accrue to whichever party’s employees perform the work during which the invention is invented.

(f) **Data rights**

Finding on pre-2007 contracts: LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”⁴³⁰

For post-2006 contracts: NASA has discontinued the use of LERD clauses.⁴³¹

Thus, almost all of the facts that led to the Appellate Body’s conclusion that pre-2007 NASA contracts were “akin to a species of joint venture” are no longer accurate with respect to post-2006 contracts. The EU has accordingly failed to meet its burden of proof to establish that the post-2006 contracts were financial contributions.

225. In fact, these considerations, along with other evidence before the Panel, support a different conclusion – that the transactions are purchases of services. On the NASA side of the transaction, by far the primary contribution consists of the payments. Provision of facilities and equipment is minimal or nonexistent, and the contracts generally do not provide for input from NASA personnel except as reviewers of results produced by the contractor. On the Boeing side of the transaction, the primary contribution consists of services, as witnessed by the descriptions of the work in the contracts:

- “quantify by analysis the benefits of a PRSEUS fuselage concept in the complex loading environment found of the BWB finite element model (FEM)” and “more complex aspects of pressurized flat-panel designs will be investigated”⁴³²

⁴²⁹ *US – Large Civil Aircraft (AB)*, para. 596.

⁴³⁰ *US – Large Civil Aircraft (AB)*, para. 596

⁴³¹ The EU points out that Contract NND11AG03C contains a clause under which NASA agrees to protect “a wide range of data being developed in the course of the NASA-funded research . . . from release for between 5 and 15 years.” EU FWS, para. 113. Dryden Flight Research Center adopted this clause near the outset of the new program formulation on an exceptional basis, and is not representative of standard practice. No other post-2006 aeronautics research contract contains such a clause. NASA HQ has since that time clarified NASA policies in this area, and instituted the necessary review processes for adherence to NASA policy

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 80

- “propulsion airframe aeroacoustic experimentation shall be performed.”⁴³³
- “The objectives for Phase IV and V: Completing all planning and approval for the full envelope flight test expansion;” Perform Data Reduction of the Flight Test Data;” etc.⁴³⁴
- “The Contractor shall take a phased and gated approach to experimentally validating an N+2 supersonic low-boom configuration;” “design a low-boom aircraft;” and “conduct analysis on the effect of the inlet and nozzle plume on the sonic boom and the aircraft efficiency.”⁴³⁵
- “The contractor shall define an advanced turbofan engine;” “The contractor shall document the aerodynamic, structural and safety impacts of a high wing version low-wing configuration,” etc.⁴³⁶

All of these are services. Even where the contract involves production of a good, it is a test article to be used for the purpose of some sort of research.⁴³⁷ NASA’s payment of money for what it received makes the arrangements purchases.⁴³⁸

226. In *Canada – Renewable Energy*, the Appellate Body noted that the panel in that dispute found, without dispute from the parties, that purchases of goods within the meaning of Article 1.1(a)(1)(iii) “occur ‘when a “government” or “public body” obtains possession (including in the form of an entitlement) over a good by making a payment of some kind (monetary or otherwise).’”⁴³⁹ Under that logic, when a government obtains entitlement to the supply of a service by making a payment of some kind, there would be a purchase of a service. As the extensive evidence cited above indicates, that is exactly what happens under a NASA research contract – the agency pays money, and obtains entitlement to the performance of services. Therefore, these contracts are purchases of services.

⁴³² Contract NNL07AA48C, SOW, p. 1 (Exhibit USA-0105(HSBI), frame 17).

⁴³³ Task NNL10AA71T, p. 3 (Exhibit EU-162).

⁴³⁴ Task NNL09AD50T, p. 2 (Exhibit EU-110).

⁴³⁵ Task NNL10AA00T, Attachment 2, p. 1 (Exhibit EU-145).

⁴³⁶ Task NNL11AA00T, Attachment J-2, pp. 2-5 (Exhibit EU-126).

⁴³⁷ *E.g.*, Contract NNL07AA54C, SOW, pp. 1-2 (Exhibit USA-0106(HSBI)) (“Phase I shall involve the development a non-proprietary 3D aircraft concept definition. . . . In Phase II, the wind tunnel model evolved in Phase I shall be designed and built. . . . In the second year of Phase 2, the model shall be tested in the wind tunnel. . . .”).

⁴³⁸ *US – Large Civil Aircraft (Panel)*, para. 7.110 (“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.”).

⁴³⁹ *Canada – Renewable Energy (AB)*, para. 5.123.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 81

4. *Purchases of services and the alleged provision of intellectual property rights are not financial contributions.*

227. The EU has failed to establish that NASA contracts confer a financial contribution within the meaning of SCM Article 1. First, as discussed above, post-2006 NASA procurement contracts are purchases of services, and purchases of services are excluded from the definition of “financial contributions” in SCM Article 1. Second, the alleged “transfer” of IP rights to Boeing⁴⁴⁰ also does not fall within the definition of “financial contribution” in SCM Article 1, since intellectual property rights are not goods, and no “transfer” actually takes place.⁴⁴¹

a. A purchase of services is not a financial contribution.

228. As the original panel found, the definition of “financial contribution” in Article 1 of the SCM Agreement excludes purchases of services. Because post-2006 NASA contracts are purchases of services, they do not entail a financial contribution, and therefore are consistent with the U.S. compliance obligations in this dispute.

229. During the original dispute, the United States, Canada, Japan, and Korea all argued that the SCM Agreement excludes purchases of services.⁴⁴² The panel agreed on the basis of the ordinary meaning, context, object and purpose, and preparatory work regarding Article 1 of the SCM Agreement. In particular, the panel noted that the ordinary meaning would not permit a purchase of services to qualify as a financial contribution, except potentially as “a direct transfer of funds” within the meaning of Article 1.1(a)(1)(i).⁴⁴³ However, the panel rejected this interpretation, based on the “glaring difference” between the two parts of subparagraph (iii).⁴⁴⁴

230. On appeal, the Appellate Body viewed the Panel’s interpretation as moot, given that it found the pre-2007 NASA and DoD agreements to be similar to joint ventures.⁴⁴⁵ However, the Appellate Body did not express any reservations regarding the panel’s textual analysis, and therefore the United States considers that the original panel’s reasoning regarding purchases of services remains valid. As explained above, all of the post-2006 NASA contracts that are relevant to this compliance dispute are “properly characterized as purchases of services.” Consequently, they do not fall within the definition of “financial contribution” in Article 1 of the SCM Agreement, and are consistent with the U.S. compliance obligations in this dispute.

⁴⁴⁰ See EU FWS, para. 177.

⁴⁴¹ To the very limited extent that any contracts did provide for such access, NASA did so for the purpose of facilitating the provision of services to it for the lowest possible cost.

⁴⁴² See *EC – Large Civil Aircraft (Panel)*, para. 7.952.

⁴⁴³ *EC – Large Civil Aircraft (Panel)*, para. 7.954.

⁴⁴⁴ See *US – Large Civil Aircraft (Panel)*, para. 7.955-7.969.

⁴⁴⁵ See *US – Large Civil Aircraft (AB)*, para. 625.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 82

- b. Intellectual property rights accruing to Boeing by reason of activities conducted under contracts, cooperative agreements, and SAAs are not financial contributions.*

231. The EU also asserts NASA “transferred” patent and other intellectual property rights to Boeing “under the NASA aeronautics R&D programs,” and that this constitutes a provision of goods under Article 1.1(a)(1)(iii) of the SCM Agreement. Every aspect of this argument is wrong.

232. First, NASA did not “transfer” intellectual property rights to Boeing. Under U.S. law, a patent is the property of the person who made the invention. Thus, when a Boeing employee working under one of the contracts or cooperative agreements made an invention, it became the inventor’s property by operation of law. It is not unusual for companies to make arrangements with employees to transfer to the employer title to patents for inventions made while working in the pay of the employer. However, in the first instance it is the employee who owns the invention, and then transfers it to the employer. Thus, absent some other contractual arrangement, by operation of U.S. law, a Boeing employee working for Boeing on a NASA contract would own 100 percent of the rights in any invention made by the employee. However, section 305 of the Space Act provides that, for any such invention, “such invention shall be the exclusive property of the United States, and if such invention is patentable a patent therefor shall be issued to the United States upon application made by the Administrator.”⁴⁴⁶ Therefore, the only transfer of intellectual property rights by reason of a NASA contracts is *from* the inventor *to* NASA. The agency transfers nothing to the contractor. (As described in the Appellate Body report in the original proceedings, the Space Act allows the Administrator to waive the taking of title, but once again, in so doing, the Administrator is not transferring anything to the contractor, but is merely allowing the contractor to keep what would otherwise belong to it.)

233. Second, intellectual property is not a good. It represents ownership over an idea, a performance, or a work of some kind, and not over a tangible item. The existence of the *Agreement on Trade-Related Aspects of Intellectual Property* demonstrates the fallacy of the EU’s argument. If intellectual property were a good, many aspects of the TRIPS Agreement would be covered by the GATT 1994 and would, accordingly, be superfluous. Furthermore, the TRIPS Agreement is not listed in Annex 1A of the *Marrakesh Agreement Establishing the World Trade Organization*, which is entitled “Multilateral Agreements on Trade in Goods” but rather is Annex 1C, demonstrating that Members agreed that the TRIPS Agreement is not concerned with goods.

234. Third, any intellectual property rights developed as a result of work under a NASA contract are an effect of the contract, and not an independent financial contribution. As the original panel found:

⁴⁴⁶ Space Act, § 305(a)(2) (Exhibit EU-252).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 83

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.⁴⁴⁷

The original panel accordingly rejected the EU argument that the attribution of intellectual property rights under government contracts was a financial contribution separate from the EU allegations regarding payments, facilities, equipment, and employees. The EU did not appeal this finding, which the DSB subsequently adopted.

235. Therefore, the EU has failed to make a *prima facie* case that the alleged transfer of intellectual property rights was a financial contribution.

5. *None of the alleged financial contributions confers a benefit.*

236. The EU's analysis of the benefit fails on several levels – by misreading the Appellate Body's reasoning in the original proceeding, by using an inappropriate benchmark for the transactions at issue, and by misunderstanding the evidence it puts forward. It errs at the outset by reading the findings on appeal as a mandate for a particular approach, when in fact the Appellate Body was completing the analysis based on a set of findings and evidence with which it expressed no small discomfort. The United States is not challenging the applicability of those findings to the matter in the original proceeding, namely, the pre-2007 programs. However, the Panel cannot simply accept the EU's assumption that, despite new programs and new evidence, the conclusions about old programs and old evidence automatically apply.

237. The EU also fails repeatedly to choose the correct benchmark for the transactions at issue. If the EU accepts that pre-2007 NASA contracts are "akin to a species of joint venture," then the benchmark must properly reflect a joint venture. If it concludes that post-2006 NASA contracts are a financial contribution, it needs to take into account that NASA was purchasing something, and base its evaluation of the benefit on whether NASA paid more than adequate remuneration for what it obtained. The EU never examines the nature, design, structure, and operation of the transactions, instead leaping to broad conclusions based on generalities.

⁴⁴⁷ *US – Large Civil Aircraft (Panel)*, para.7.1309.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 84

238. And, finally, the EU errs in its evaluation of the evidence it adduces. It notes correctly that the United States recognized certain EU evidence as demonstrating one way that entities in market transactions might split intellectual property rights. However, it errs in concluding that “it was uncontested that these were valid market benchmarks.”⁴⁴⁸ The point the United States accepted was that the documents cited by the EU contained valid observations as to the intellectual property term of certain transactions. But to be “benchmarks,” they would have to establish the other terms of the transactions to allow a full comparison. Thus, most of the EU’s evidence on intellectual property is worthless as a benchmark because it indicates nothing about whether other terms the parties might use.

239. The EU’s evidence has other flaws. The financial contribution it alleges, which the United States does not contest for SAAs and pre-2007 NASA contracts, is a legal relationship “akin to a species of joint venture” with “characteristics analogous to equity infusions.”⁴⁴⁹ But the centerpiece of its benefit analysis, the Dieu statement, sets out an intellectual property arrangement that applies “{w}hen Airbus *fully* funds R&D or *purchases* engineering product design work from a supplier.”⁴⁵⁰ However, the Appellate Body concluded that the NASA contracts “involve the commitment of resources from both parties. . . . NASA commits to provide financial resources and contributes the use of its facilities, equipment, and employees, while Boeing contributes the work of its scientists and engineers.”⁴⁵¹ Thus, the Dieu declaration is irrelevant to the situation at hand.

240. The EU also cites a 2002 contract between Boeing and the National Institute for Aviation Research (“NIAR”). However, John Tomblin, the current director of NIAR, explains that even at the time it was negotiated, this contract represented a deviation from NIAR policy, which required that the institute take title to any inventions invented by its staff while working on a collaborative research project.⁴⁵² He appends to his statement the current standard contract, which provides:

17. Intellectual Property.

All inventions arising out of the performance of any work or services conducted by WSU in completion of this Agreement will be promptly disclosed to the Company. All inventions, patent applications, patents, or copyrights made during the term of this Agreement shall be owned as follows in accordance with Kansas Board of Regents policy in order to produce the greatest benefit to the public:

⁴⁴⁸ EU FWS, para. 185.

⁴⁴⁹ *US – Large Civil Aircraft (AB)*, para. 624.

⁴⁵⁰ Declaration of Regina Dieu, para. 4 (Exhibit EU-30).

⁴⁵¹ *US – Large Civil Aircraft (AB)*, para. 611.

⁴⁵² Statement of John Tomblin, para. 6 (Exhibit USA-263).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 85

- a) Inventions which involve the use of, composition of, modification to, or improvement to Company’s product or information or a derivative analogue thereof and which are unexpected and unique shall belong to WSU if made solely by WSU employee; shall belong to Company if made solely by a Company employee; and shall belong to both WSU and Company if made jointly or in collaboration; and
- b) Inventions which cover a scientific process, technique, procedure, medium device or other process which are not unique to or derived from Company’s product shall be owned by WSU if made solely by a WSU employee; shall be owned by Company if made solely by a Company employee; and shall be owned by both WSU and Company if made jointly or in collaboration.

In consideration of funding, Company shall have the first option to negotiate a license for said inventions, patents and copyrights. Company will have the right to sublicense their subsidiaries and affiliates, but no other third party may be sublicensed without approval of WSU. Such option period shall last for six (6) months from the date the invention is first disclosed to the Company, but in no case longer than one (1) year from the date the invention is first disclosed to the Company.⁴⁵³

Thus, the NIAR practice cited by the EU indicates that the division of intellectual property works similarly to NASA practice: the researching entity gets the patent if its employees invent the invention, the funding entity gets the patent if its employees invent the invention, and they share the patent if the invention results from the work of both parties’ employees.

241. The other sources cited by the EU goes only to the split in intellectual property rights.⁴⁵⁴ Therefore, they provide no benchmark for transactions that, like the NASA transactions at issue in this dispute, contain a number of terms.

- a. *As modified, the pre-2007 NASA contracts do not confer a benefit when compared with commercial joint ventures*

242. There is no dispute between the United States and the EU as to the nature of the financial contribution conferred by NASA pre-2007 contracts. Following the findings of the Appellate Body, they created a collaborative relationship “akin to a species of joint venture” having “characteristics analogous to equity infusions.”⁴⁵⁵ Thus, an analysis of the benefit would need to start with benchmarks reflecting those types of collaborative relationships, with a particular emphasis on joint ventures.

⁴⁵³ Statement of John Tomblin, Attachment (Exhibit USA-263).

⁴⁵⁴ EU FWS, para. 184.

⁴⁵⁵ *US – Large Civil Aircraft (AB)*, para. 624.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 86

243. The benchmark would need to be compared with the terms of the NASA contracts, as modified by the Subject Invention and Patent Licensing Agreement. The EU is extremely negative about this agreement, calling it “worthless” and “a ‘sham’ transaction” in which “Boeing has given up nothing of value for itself.”⁴⁵⁶ These attacks are unwarranted. While it is correct that “the U.S. Government is not in the business of making or selling aircraft-related products for commercial sale,” and that government policy currently precludes entry into commercial aircraft, Boeing has assumed the risk that the policy may change. Under the previous licensing terms, in the event of the change, Boeing would still hold the right to preclude commercial use by the government. Under the Licensing Agreement, it would not.

244. The EU’s diatribe is also irrelevant, because it fails to address the critical issue of comparing the terms of the NASA contracts, as modified by the Licensing Agreement, against the terms of a joint venture created to conduct research with results of interest to both parties. Contract D from the original proceeding is one such benchmark. While the Appellate Body considered that it was less favorable to the researching party than the original terms of the NASA contracts, the modifications under the Licensing Agreement change the situation.

245. Specifically, [BCI ^{457 458 459 460}

246. BCI ^{461 462 463}

247. BCI ^{464 465}].⁴⁶⁶

248. The Appellate Body identified [BCI ⁴⁶⁷] according to the Appellate Body, NASA/DoD contracts do *not* allow the sponsor (that is, NASA/DoD) to exploit foreground technology for commercial purposes, but rather only for government purposes and uses. Consequently, the Appellate Body concluded that the NASA/DoD contracts provided better-than-market terms to

⁴⁵⁶ EU FWS, para. 190.

⁴⁵⁷ Contract D – [BCI] (Panel Exhibit US-1211(BCI)) (“Contract D”), p. 2.

⁴⁵⁸ See *EC – Large Civil Aircraft (AB)*, para. 609.

⁴⁵⁹ Contract D, arts. 5.3, 5.6 (Exhibit USA-234(BCI)).

⁴⁶⁰ The contract states: “[BCI].” Contract D, para. 6.2 (Exhibit USA-234(BCI)). In turn, [BCI]. Contract D, p. 4.

⁴⁶¹ Contract D, art. 6.4.5 (Exhibit USA-234(BCI)).

⁴⁶² Contract D, art. 6.3.1 (Exhibit USA-234(BCI)).

⁴⁶³ *EC – Large Civil Aircraft (AB)*, para. 657.

⁴⁶⁴ Contract D, arts. 6.3.1-6.3.4 (Exhibit USA-234(BCI)).

⁴⁶⁵ Contract D, arts. 6.4.1 (Exhibit USA-234(BCI)).

⁴⁶⁶ Contract D, arts. 6.4.4, 11 (Exhibit USA-234(BCI)).

⁴⁶⁷ *US – Large Civil Aircraft (AB)*, para. 657 (“[BCI].”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 87

the entity conducting the research, and conferred a subsidy to Boeing.⁴⁶⁸ However, the Appellate Body also found that there was one important similarity between Contract D and the NASA/DoD contracts: under both sets of contracts, the commissioned party “obtains sole ownership over all intellectual property developed under the contract.”⁴⁶⁹ In the Appellate Body’s view, this similarity set Contract D apart from other potential benchmarks that it considered (*i.e.*, Contracts A, B, and C).⁴⁷⁰

249. As amended,⁴⁷¹ the NASA/DoD contracts and Contract D are essentially the same [BCI ⁴⁷²] Therefore, with respect to use rights, the NASA/DoD contracts are slightly more favorable to the commissioning party than Contract D.

250. With respect to commercial third-party licensing (which the Appellate Body did not address), [BCI].

251. The only salient difference between the contracts is that [BCI] However, [BCI]⁴⁷³ And, even if this element of the overall deal could be seen as slightly more favorable to the commissioning party, it is offset by the fact that Contract D offers [BCI].

252. Since the NASA/DoD contracts (as amended) are similar to Contract D in all relevant respects, and since none of the differences affect return on investment, the NASA/DoD contracts are not subsidies within the meaning of Article 1 of the SCM Agreement.

b. Post-2006 NASA contracts do not confer a benefit, as the remuneration to Boeing is not more than adequate.

253. With respect to post-2006 NASA contracts, the EU makes a different mistake. Because it has identified the financial contribution incorrectly, it benchmarks against a joint venture. In section III.C.3.b, the United States demonstrated that the transactions at issue were purchases of services and, therefore, were not a financial contribution at all. However, even if the Panel does not accept this conclusion, the fact that the United States was buying something in these transactions must play a role in the analysis.

⁴⁶⁸ See *US – Large Civil Aircraft (AB)*, para. 660.

⁴⁶⁹ *US – Large Civil Aircraft (AB)*, para. 657.

⁴⁷⁰ See *US – Large Civil Aircraft (AB)*, para. 660.

⁴⁷¹ The amendments to the NASA/DoD contracts provided the U.S. government with “an irrevocable, non-exclusive, non-transferable, royalty-free license under the Patent Rights to use, make, offer for sale, sell, and import each Subject Invention for commercial purposes, without the right to: (A) sublicense this right; (B) exercise this right in a commercial venture of any type with a third party; or (C) have the Subject Invention made or sold by a third party for a commercial purpose.” Subject Invention and Patent License Agreement (Exhibit USA13-09(BCI)), art. 2; see also Supplemental Subject Invention and Patent License Agreement, art. 1.a (conferring the same rights to DoD) (Exhibit USA13-10(BCI)).

⁴⁷² See *EC – Large Civil Aircraft (AB)*, para. 609.

⁴⁷³ The United States notes that [BCI]

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 88

254. In this context, even if the EU could succeed in showing that no private entity contracting research services would buy only own-use rights in patents that result from the research, that would be irrelevant. The proper question under the remuneration standard focuses on what the government paid for what it obtained. A benefit would exist only if the government paid too much for the rights it obtained. The EU has failed entirely to address that standard.

255. In this regard, the Appellate Body has found that, in situations where a transaction presents valuation difficulties, “such benchmark may also be found in price-discovery mechanisms such as competitive bidding or negotiated prices, which ensure that the price paid by the government is the lowest possible price offered by a willing supply contractor.”⁴⁷⁴ As the contracts themselves show, *all* of NASA’s aeronautics research contracts are subject to competitive bidding.⁴⁷⁵ Thus, the Panel can have a high degree of confidence that NASA did not pay more than adequate remuneration for its post-2006 contracts. Indeed, in this dispute the Appellate Body recognized that competitive bidding can influence the structure of NASA and DoD contracts. In particular, it noted that “Boeing’s monetary contribution is consideration for the enhanced data rights that it obtains under the assistance instruments, which grant more limited rights to the government over the data.”⁴⁷⁶ The variation in price to compensate for relatively stronger data rights protections for Boeing confirms that the NASA/DoD contracts reflect a negotiated bargain.

c. SAAs do not confer a benefit when compared with commercial joint ventures.

256. The EU’s only analysis of benefit does not differentiate among the types of instruments used by NASA – it simply assumes that all of the instruments at issue contain the same clause regarding attribution of patent rights. In fact, the EU benefit analysis does not even mention SAAs.

257. However, the EU’s assumption is incorrect. As the original Panel recognized, the allocation of patent rights provided in the Bayh-Dole Act and extended to all procurements applies to research activities *funded* by the federal government.⁴⁷⁷ Since SAAs are not funded by the government, NASA considers that it has flexibility to adopt patent attribution rules different from the standard. For example, under Article 7.0 of the umbrella SAA1-757:

⁴⁷⁴ *Canada – Renewable Energy (AB)*, para. 5.228.

⁴⁷⁵ Any contract that is not subject to competitive bidding must contain an entry in box 13 of the standard NASA contract form indicating the reason that the contract is not subject to “full and open competition.” The absence of such an indication means that the contract was open to competitive bidding. *E.g.*, Contract NNA06BC41C, p. 1 (Exhibit USA-49(HSBI)) (USA13-060).

⁴⁷⁶ *US – Large Civil Aircraft (AB)*, para. 664.

⁴⁷⁷ *US – Large Civil Aircraft (Panel)*, para. 7.1279.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 89

7.1 If a SUBJECT INVENTION is invented only by Boeing's employee(s), then all rights to such SUBJECT INVENTION shall belong to Boeing.

7.2 If a SUBJECT INVENTION is invented only by NASA's employee(s), then all rights to such SUBJECT INVENTION shall belong to NASA. Boeing may apply to acquire a royalty-bearing license, on terms to be negotiated, for any patent applications and patents covering such SUBJECT INVENTION. This activity is subject to 37 Code of Federal Regulations (C.F.R.) Part 404.

* * * * *

7.4 If a SUBJECT INVENTION is jointly invented by one or more of Boeing's employees and by one or more of NASA's employees, then all rights to such SUBJECT INVENTION shall jointly belong to Boeing and NASA. The Parties shall negotiate as to who will pay for the preparation and filing of patent applications covering the SUBJECT INVENTION in one or more countries, who will prosecute such applications, who will maintain such applications during prosecution, and who will maintain any resulting patents.⁴⁷⁸

Thus, when Boeing's employees invent a patentable invention during work under this instrument, there is no government use license for the patent – the company gets all the rights. Viewed from an economic perspective, when Boeing contributes its own resources, without payment from NASA, it gets greater rights than under a contract, when the government pays the company to perform work.

258. This is significant both because it shows that there is a relationship between the level of patent rights and the level of contribution to the research effort. It also demonstrates the error of the EU's benefit argument regarding SAAs. As the intellectual property terms are not the same as under a contract, a separate comparison with relevant benchmarks is necessary. As the EU has not done this, it has failed to make a *prima facie* case that partially reimbursable and nonreimbursable SAAs confer a benefit for purposes of Article 1.1(b) of the SCM Agreement.

6. *The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.*

259. Under Article 2.1(a) the SCM Agreement, a subsidy is specific if the granting authority or the legislation under which the granting authority operates explicitly limits access to the subsidy to certain enterprises. Article 2.1(c) provides that specificity will also exist if other factors indicate that it is in fact specific. With regard to NASA contracts and SAAs, the EU alleges a financial contribution in the form of payments or provisions of goods and services through NASA contracts and SAAs. The only benefit alleged by the EU is that, under these

⁴⁷⁸ SAA1-757, p. 7 (Exhibit USA-82).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 90

instruments, Boeing receives more favorable rights in patents than would be the case if a commercial actor had funded the research.⁴⁷⁹ The Appellate Body found that the attribution of patent rights, if taken as a free-standing subsidy, is not specific because it is available under any government contract, by any agency, in any sector.⁴⁸⁰ The fact that this treatment is memorialized in an instrument – a NASA contract – does not change the fact of its widespread availability across all sectors of the U.S. economy. Therefore, the subsidy, as alleged by the EU, is not specific.

260. The EU asserts that specificity exists under Article 2.1(a) of the SCM Agreement because access to NASA aeronautics research programs is limited to entities that conduct aeronautics research.⁴⁸¹ However, this contention does not address the standard established by the SCM Agreement – whether access to the *subsidy* is limited. The EU has never established, or even claimed, that NASA research programs, taken as a whole, are a subsidy to Boeing. Its subsidy allegation instead addresses alleged financial contributions effectuated through contracts and SAAs. The only benefit alleged is that, in those transactions, Boeing receives rights in patents more favorable than under a commercial transaction. Thus, the specificity analysis must be based on that subsidy. As the Appellate Body has already found that, assuming *arguendo* that this situation is a subsidy, it is not specific. Therefore, the EU’s specificity claim under Article 2.1(a) of the SCM Agreement fails.

261. The EU also argues that the alleged benefit is specific under Article 2.1(c). But again, it addresses only NASA research programs, and ignores the inquiry mandated by the SCM Agreement into the subsidy, namely the allocation of patent rights common to all U.S. government contracts. The EU has presented no evidence as to access to that treatment as available through U.S. government contracting. Therefore, its specificity claim under Article 2.1(c) also fails.

262. As neither of the grounds the EU asserts for specificity is valid, the EU has failed to establish that the subsidy it alleges – favorable intellectual property rights under U.S. government contracts – is specific.

⁴⁷⁹ EU FWS, paras. 184-186. Although the EU describes the benefit as relating generally to “intellectual property,” the only comparison it makes is between government patent rights clauses and those under commercial transactions. Under U.S. government contracts, the division of data rights is, in fact, different, with the general rule being that the government obtains unlimited rights to use data resulting from work under the contract for any purpose, government or otherwise. *US – Large Civil Aircraft (Panel)*, para. 7.1300. The EU has provided no evidence from a legitimate benchmark as to the division of data rights in commercial transactions, or compared it to each transaction.

⁴⁸⁰ *US – Large Civil Aircraft (AB)*, para. 799.

⁴⁸¹ EU FWS, para. 193.

D. The Only DoD Subsidies Found to Exist: Payments and Access to Facilities under Agreements Funded through the Original 23 Program Elements

263. It cannot be emphasized enough that the only findings of WTO inconsistency regarding DoD were with respect to cooperative agreements, technology investment agreements (“TIAs”), and Other Transaction Agreements (“OTAs”; collectively (“Agreements”) funded through the original 23 program elements, and that they formed the basis for the only recommendations and rulings of the DSB applicable to DoD. In light of the EU’s failure, after seven years of trying in the original dispute, to obtain a recommendation with regard to other instruments or other program elements, there was no reason for the United States to modify anything beyond the cooperative agreements, TIAs, and OTAs covered by the Appellate Body’s findings.

264. DoD’s use of these instruments under the original 23 program elements with respect to Boeing has changed dramatically. First of all, the number of cooperative agreements, TIAs, and OTAs between Boeing and DoD elements under the 23 original program elements has plummeted, from 50 during the 1992-2006 period to three from 2007 to 2012.⁴⁸² DoD has also renegotiated the terms of the agreements covered by the original proceedings, based on a commercial benchmark. Thus, these transactions no longer contain any subsidy element. In any event, their amount is too small to have any meaningful impact.

265. However, the EU chose to expand its compliance challenge far beyond the subsidies found to exist by the original panel and the Appellate Body. It did this in two ways, First, beyond the agreements (cooperative agreements, TIAs, and OTAs) funded through the 23 original program elements, the EU has asserted claims on procurement contracts. Second, the EU sought to add a series of new program elements, which it did not originally challenge, to the dispute.

266. As the Panel is aware, the United States objected to this expansion of the dispute, and has sought a preliminary ruling that these additional claims are not properly within the Panel’s terms of reference. As the Panel has not yet taken action on the U.S. preliminary ruling request, this first written submission will address all of the EU claims:

- This section demonstrates that U.S. measures taken to comply with respect to the agreements funded through the 23 original program elements withdrew the subsidy found to exist, which consisted of terms for the allocation of patent rights more favorable than would have been available under a commercial transaction.
- Section E demonstrates that procurement contracts funded through the 23 original program elements do not confer subsidies, and are not specific.

⁴⁸² See *DoD Agreements Listed in Annex B to the U.S. Compliance Notification* (Exhibit USA-107) (USA13-17(revised)). If the new program elements challenged by the EU are included, the number of agreements rises only slightly, to five. That is still vastly fewer than during the 1992-2006 period.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 92

- Section F demonstrates that instruments of all types funded through the new program elements are also not subsidies, and are also not specific.

267. The legal issue in this dispute, as framed by the EU, is whether the payments and facilities DoD provided to Boeing through the programs identified by the EU, in light of the compliance measures taken by the United States, are subsidies that cause adverse effects in the period after September 23, 2012.⁴⁸³ The United States discusses the adverse effects element of that showing in Section IV of this submission. To establish the existence of current subsidies with respect to agreements funded through the 23 original program elements, the EU's argument would require: (1) an evaluation of the efficacy of the compliance measures taken by the United States with respect to the subsidies previously found to exist; (2) a thorough evaluation of terms and conditions of any new subsidies alleged by the EU, again in light of U.S. compliance measures, and (3) correct application to those facts of the legal tests for the existence of a financial contribution, conferral of a benefit, and specificity. In spite of a lengthy submission, the EU has done none of these things.

268. Section 1 discusses important changes in DoD's use of agreements in its dealings with Boeing. In particular, DoD and Boeing entered into far fewer cooperative agreements, TIAs, and OTAs related to research after 2006 than before, both in general and under the 23 original program elements.

269. Section 2 summarizes the key aspects of the agreements between DoD and Boeing in the FY2007-FY2012 period. These agreements are the putative financial contributions that the EU challenges, and it is the terms of the relevant instruments that will determine whether or not the transactions are subsidies. The evidence shows that these agreements produced research on topics of military use, and did not have the development of civil technology as an objective. Although the United States went to considerable time and effort to make this information available in response to the Panel's Article 13 request, commenced following the suggestions of the EU, the EU largely ignored it, choosing instead to rely on highly generalized discussions of research topics in budget materials, which indicate nothing about the terms of the actual transactions. As these terms must form the basis of any analysis of financial contribution and benefit, the EU's failure to address them is fatal to its arguments. This section also demonstrates that the magnitude of any financial contributions is vastly lower than alleged by the EU.

270. Section 3 demonstrates that the EU's methodology for calculating the value of any financial contribution is invalid, and produces an incorrectly inflated figure. Section 4 demonstrates that the benefit alleged by the EU is not specific. Finally, Section 5 explains that when it comes to specificity, the EU incorrectly limits its analysis to DoD, when the Appellate Body has already found that the subsidy the EU alleges – the attribution to Boeing of more intellectual property rights than it would receive under a commercial transaction – must be assessed on a broader level, and is not specific.

⁴⁸³ EU FWS, para. 49.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 93

1. *DoD has reduced the number and value of agreements with Boeing under the original 23 program elements, and modified their terms so as to eliminate the benefit.*

271. The statistical point is quite simple. Although DoD funded 50 agreements with Boeing in whole or in part through the 23 original program elements during the 1992-2006 period, in the 2007-2012 period, it funded only three. Payments under the outstanding agreements were also relatively low – \$[BCI].⁴⁸⁴ Under the EU's theory, roughly half of this amount⁴⁸⁵ (approximately \$[BCI]) would be attributable to large civil aircraft technologies. Addition of the new program elements does not change the situation appreciably, adding only two agreements and roughly \$[BCI] to the total value attributable to large civil aircraft.⁴⁸⁶

272. In response to the recommendations and rulings of the DSB, DoD also negotiated a modification to the terms of all of the cooperative agreements, TIAs, and OTAs for research funded through the 23 original PE numbers. Specifically, DoD considered all of the benchmarks advanced by the parties in the original proceedings, noting in particular the Appellate Body's observation that [BCI].⁴⁸⁷ Therefore, DoD negotiated a license with Boeing under which [BCI]. This was a package of rights that was, if anything, more advantageous to DoD than the package of rights was to the funding entity under Contract D.

2. *The payments and access to facilities at issue*

273. DoD entered into only three cooperative agreements, TIAs, or OTAs for research under the 23 original PEs in the 2007-2012 period. All of them have military objectives, and do not seek the development of technology with civil uses.

274. **N00173-08-2-C009** called for the assembly of technology packages for materials testing on the International Space Station.⁴⁸⁸ The United States includes this cooperative agreement because the Navy, which funded it, has no records indicating which program elements funded DoD's contribution to this effort. Therefore, in an abundance of caution, the United States treats it as if it were in fact subject to the recommendations and rulings of the DSB. However, a review of the subject matter indicates that it has no relationship to large civil aircraft or the EU's

⁴⁸⁴ *Funds obligated to Air Force Agreements with Boeing, FY2007-FY2012, by program* (Exhibit USA-108(BCI)).

⁴⁸⁵ *Department of Defense Subsidies to Boeing's LCA Division*, p. 1 (Exhibit EU-37)

⁴⁸⁶ Only one of the new program elements, DARPA's Materials and Biological Technology (0602715E), funded agreements with Boeing during the FY2007-FY2012. There were two of these, FA8650-07-2-7716 and HR0011-10-2-0001, which had a total of \$[BCI] in obligations during the 2007-2012 period. *Funds obligated to Air Force Agreements with Boeing* (Exhibit USA-111(BCI)).

⁴⁸⁷ *US – Large Civil Aircraft (AB)*, para. 654.

⁴⁸⁸ Navy Agreement N00173-08-2-C009 (Exhibit USA-109(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 94

allegations of adverse effects. The Navy paid Boeing approximately [[HSBI]] under this agreement in the 2007-2012 period, and Boeing's contribution was [[HSBI]].⁴⁸⁹

275. **FA8650-08-2-3834** was issued as a result of Boeing's response to a BAA put out by AFRL. [[HSBI]]⁴⁹⁰ [[HSBI]]⁴⁹¹ [[HSBI]]⁴⁹² The military usefulness of this work is obvious. The standard patent clause applied to this agreement, with the exception that any invention funded completely by Boeing using its own IR&D funds would not be subject to the clause.⁴⁹³ Access to government facilities took the form of use of NASA Langley's 14x22 foot V/STOL wind tunnel.⁴⁹⁴ DoD paid Boeing [BCI] under this agreement in the 2007-2012 period. Boeing agreed to contribute [BCI] during the 2008-2011 period.⁴⁹⁵

276. **FA8650-11-2-2138** provides for a [[HSBI]]. The objective is [BCI]⁴⁹⁶ The standard clause related to inventions applied.⁴⁹⁷ Data rights were standard, with the exception of the elaboration of certain enumerated data developed exclusively at private expense, for which the government received limited rights or restricted rights.⁴⁹⁸ The agreement does not provide for access to DoD facilities.⁴⁹⁹ DoD paid Boeing [BCI] under this agreement in the FY2007-FY2012 period. Boeing agreed to contribute [[HSBI]] during the 2011-2012 period.⁵⁰⁰ The term of the agreement is 2011-2015, with a final government contribution of [[HSBI]] and a Boeing contribution of [[HSBI]].

277. For the three agreements taken together, the total value of DoD's obligations in the FY2007-FY2012 period was \$[BCI], which was less than Boeing's contribution. The only access to facilities was the use of the NASA Langley wind tunnel for testing under Air Force Agreement FA8650-08-2-3834. The agreement does not place a value on this access, but as it is for a single wind tunnel for a defined series of tests, it is unlikely to modify the total value of DoD contributions appreciably.

⁴⁸⁹ Navy Agreement N00173-08-2-C009, Modification 2, (Exhibit USA-0109(HSBI), frame 12/15).

⁴⁹⁰ Air Force Agreement FA8650-08-2-3834, SOW, p. 1 (Exhibit USA-110(HSBI)).

⁴⁹¹ Air Force Agreement FA8650-08-2-3834, SOW, p. 2 (Exhibit USA-110(HSBI)).

⁴⁹² Air Force Agreement FA8650-08-2-3834, Modification 2 (Exhibit USA-110(HSBI), frames 26-27/44).

⁴⁹³ Air Force Agreement FA8650-08-2-3834, p 30 (Exhibit USA-110(HSBI)).

⁴⁹⁴ Air Force Agreement FA8650-08-2-3834, p 7 (Exhibit USA-110(HSBI)).

⁴⁹⁵ *Payments to Boeing under Air Force agreements* (Exhibit USA-111(BCI)); Air Force Agreement FA8650-08-2-3834, Modification 10, Attachment 2 (Exhibit USA-110(HSBI), frame 44/44).

⁴⁹⁶ Air Force Agreement FA8650-11-2-2138, p. 1 (Exhibit USA-112(HSBI)).

⁴⁹⁷ Air Force Agreement FA8650-11-2-2138, p. 11 (Exhibit USA-112(HSBI)).

⁴⁹⁸ Air Force Agreement FA8650-11-2-2138, p. 12 (Exhibit USA-112(HSBI)).

⁴⁹⁹ Air Force Agreement FA8650-11-2-2138, Modification 2, Attachment 4, frame 74/176 (Exhibit USA-112(HSBI)).

⁵⁰⁰ *Funds obligated to Air Force agreements with Boeing, FY2007-FY2012* (Exhibit USA-111(BCI)); Air Force Agreement FA8650-11-2-2138, Attachment 3 (Exhibit USA-0112(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 95

278. In addition to payments under the three agreements entered into after 2006, DoD made additional payments during the period under the following agreements entered into prior to 2007:

F49620-00-2-0384	[BCI]
F33615-03-2-3300	[BCI]
F33615-03-2-5202	[BCI]
FA8650-04-2-3449	[BCI]
FA8650-04-2-5000	[BCI]
FA8650-05-2-3503	[BCI]
Total	• \$[BCI]

Source: *Funds obligated to Air Force agreements with Boeing, FY2007-FY2012*
(Exhibit USA-111(BCI))

These agreements did not provide for use of facilities.⁵⁰¹

279. The United States does not dispute that, consistent with the findings of the Appellate Body with regard to pre-2007 agreements, all of these agreements were a financial contribution “akin to a species of joint venture.”⁵⁰² The total value of payments and facilities under these agreements in FY2007-FY2018 was approximately \$[BCI].

3. *As modified, DoD payments and access to facilities under agreements challenged by the EU do not confer a benefit when compared with commercial joint ventures.*

280. There is no dispute between the United States and the EU as to the nature of the financial contribution conferred by the DoD agreements funded through the original 23 program elements. Following the findings of the Appellate Body, they created a collaborative relationship “akin to a species of joint venture” having “characteristics analogous to equity infusions.”⁵⁰³ Both Boeing and DoD contributed financial resources, and both enjoyed the results of the research.⁵⁰⁴ Thus, an analysis of the benefit would need to start with benchmarks reflecting those types of collaborative relationships, with a particular emphasis on joint ventures.

⁵⁰¹ Air Force Agreement FA8650-05-2-3503 required wind tunnel test, but Boeing committed to obtain funding for the testing from another source. Air Force Agreement FA8650-05-2-3503, Mod 10, SOW, p. 3 (Exhibit USA-252(HSBI)).

⁵⁰² *US – Large Civil Aircraft (AB)*, para. 597.

⁵⁰³ *US – Large Civil Aircraft (AB)*, para. 624.

⁵⁰⁴ *US – Large Civil Aircraft (AB)*, paras. 604 and 622.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 96

281. The benchmark would need to be compared with the terms of the DoD agreements, as modified by the Supplemental Subject Invention and Patent Licensing Agreement.⁵⁰⁵ The EU is entirely dismissive of this agreement, calling it “worthless” and “a ‘sham’ transaction” in which “Boeing has given up nothing of value for itself.”⁵⁰⁶ These attacks are unwarranted. While it is correct that “the U.S. Government is not in the business of making or selling aircraft-related products for commercial sale,” and that government policy currently precludes government production of commercial aircraft, Boeing has assumed the risk that the policy may change. Under the previous licensing terms, in the event of the change, Boeing would have held the right to preclude commercial use by the government. Under the Licensing Agreement, it would not.

282. The EU’s diatribe is also irrelevant, because it fails to address the critical issue of matching the terms of the DoD agreements, as modified by the Licensing Agreement, against the terms of a joint venture created to conduct research with results of interest to both parties. Contract D from the original proceeding is one such benchmark. While the Appellate Body considered that it was less favorable to the researching party than the original terms of the DoD agreements, the modifications under the Licensing Agreement change the situation.

283. Specifically, [BCI ^{507 508 509 510}

284. BCI ^{511 512 513}

285. BCI ^{514 515}].⁵¹⁶

286. The Appellate Body identified [BCI ⁵¹⁷] according to the Appellate Body, NASA/DoD contracts do *not* allow the sponsor (that is, NASA/DoD) to exploit foreground technology for commercial purposes, but rather only for government purposes and uses. Consequently, the

⁵⁰⁵ Exhibit EU-401(BCI).

⁵⁰⁶ EU FWS, para. 384.

⁵⁰⁷ Contract D – [BCI] (Panel Exhibit US-1211(BCI)) (“Contract D”), p. 2 (Exhibit USA-234(BCI)).

⁵⁰⁸ See *EC – Large Civil Aircraft (AB)*, para. 609.

⁵⁰⁹ Contract D, arts. 5.3, 5.6 (Exhibit USA-234(BCI)).

⁵¹⁰ The contract states: “[BCI].” Contract D, para. 6.2 (Exhibit USA-234(BCI)). In turn, [BCI]. Contract D, p. 4 (Exhibit USA-234(BCI)).

⁵¹¹ Contract D, art. 6.4.5 (Exhibit USA-234(BCI)).

⁵¹² Contract D, art. 6.3.1(Exhibit USA-234(BCI)).

⁵¹³ *EC – Large Civil Aircraft (AB)*, para. 657.

⁵¹⁴ Contract D, arts. 6.3.1-6.3.4 (Exhibit USA-234(BCI)).

⁵¹⁵ Contract D, arts. 6.4.1 (Exhibit USA-234(BCI)).

⁵¹⁶ Contract D, arts. 6.4.4, 11 (Exhibit USA-234(BCI)).

⁵¹⁷ *US – Large Civil Aircraft (AB)*, para. 657 (“[BCI].”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 97

Appellate Body concluded that the NASA/DoD contracts provided better-than-market terms to the entity conducting the research, and conferred a subsidy to Boeing.⁵¹⁸ However, the Appellate Body also found that there was one important similarity between Contract D and the NASA/DoD contracts: [BCI].⁵¹⁹ In the Appellate Body’s view, this similarity [BCI].⁵²⁰

287. As amended,⁵²¹ the NASA/DoD contracts and Contract D are essentially the same [BCI ⁵²²] Therefore, with respect to use rights, [BCI].

288. With respect to commercial third-party licensing (which the Appellate Body did not address), [BCI]

289. The only salient difference between the contracts is that [BCI] However, [BCI]⁵²³ And, even if this element of the overall deal could be seen as slightly more favorable to the commissioning party, it is offset by the fact that Contract D offers a [BCI].

290. Since the NASA/DoD contracts (as amended) are similar to Contract D in all relevant respects, and since none of the differences affect return on investment, the NASA/DoD contracts are not subsidies within the meaning of Article 1 of the SCM Agreement.

4. The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.

291. Under Article 2.1(a) the SCM Agreement, a subsidy is specific if the granting authority or the legislation under which the granting authority operates explicitly limits access to the subsidy to certain enterprises. Article 2.1(c) provides that specificity will also exist if other factors indicate that it is in fact specific. With regard to DoD agreements, the EU alleges a financial contribution in the form of payments or provisions of goods and services. The only benefit alleged by the EU is that, under these instruments, Boeing receives more favorable rights in patents than would be the case if a commercial actor had funded the research.⁵²⁴ The

⁵¹⁸ See *US – Large Civil Aircraft (AB)*, para. 660.

⁵¹⁹ *US – Large Civil Aircraft (AB)*, para. 657.

⁵²⁰ See *US – Large Civil Aircraft (AB)*, para. 660.

⁵²¹ The amendments to the DoD agreements provided the U.S. government with “an irrevocable, non-exclusive, non-transferable, royalty-free license under the Patent Rights to use, make, offer for sale, sell, and import each Subject Invention for commercial purposes, without the right to: (A) sublicense this right; (B) exercise this right in a commercial venture of any type with a third party; or (C) have the Subject Invention made or sold by a third party for a commercial purpose.” Supplemental Subject Invention and Patent License Agreement, art. 1.a (conferring the same rights to DoD) (Exhibit EU-401(BCI)).

⁵²² See *EC – Large Civil Aircraft (AB)*, para. 609.

⁵²³ The United States notes that [BCI]

⁵²⁴ EU FWS, paras. 377-379. Although the EU describes the benefit as relating generally to “intellectual property,” the only comparison it makes is between government patent rights clauses and those under commercial transactions. Under U.S. government contracts, the division of data rights is, in fact, different, with the general rule being that the government obtains unlimited rights to use data resulting from work under the contract for any

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 98

Appellate Body found that the attribution of patent rights, if taken as a free-standing subsidy, is not specific because it is available under any government contract, by any agency, in any sector.⁵²⁵ The fact that this treatment is memorialized in an instrument – a DoD contract – does not change the fact of its widespread availability across all sectors of the U.S. economy. Therefore, the subsidy, as alleged by the EU, is not specific.

292. The EU asserts that specificity exists under Article 2.1(a) of the SCM Agreement because R&D performed is limited to defense topics⁵²⁶ However, this contention does not address the standard established by the SCM Agreement – whether access to the *subsidy* is limited. The EU has never established, or even claimed, that DoD research programs, taken as a whole, are a subsidy to Boeing. Its subsidy allegation instead addresses alleged financial contributions effectuated through agreements and other instruments. The only benefit alleged is that, in those transactions, Boeing receives rights in patents more favorable than under a commercial transaction. Thus, the specificity analysis must be based on that subsidy. As the Appellate Body has already found that, assuming *arguendo* that this situation is a subsidy, it is not specific. Therefore, the EU’s specificity claim under Article 2.1(a) of the SCM Agreement fails.

293. The EU also argues that the alleged benefit is specific under Article 2.1(c). But again, it addresses only DoD research programs, and ignores the inquiry mandated by the SCM Agreement into the subsidy, namely the allocation of patent rights common to all U.S. government contracts. The EU has presented no evidence as to access to that treatment as available through U.S. government contracting. Therefore, its specificity claim under Article 2.1(c) also fails.

294. As neither of the grounds the EU asserts for specificity is valid, the EU has failed to establish that the subsidy it alleges – favorable intellectual property rights under U.S. government contracts – is specific.

5. The EU’s methodology for valuing the alleged financial contribution provided by DoD RDT&E is invalid.

295. In the original proceedings, the EU advanced a methodology for identifying and valuing so-called “dual-use” technology researched by DoD, based on a report by its consultant, CRA. CRA purported to have evaluated DoD RDT&E “general aviation” program elements, identified projects that had both civil and military applications, and attributed a share of each such project to Boeing based on its share of “the U.S. aerospace industrial base.”⁵²⁷ For military aircraft programs, CRA divided each project into constituent elements and estimated that certain

purpose, government or otherwise. *US – Large Civil Aircraft (Panel)*, para. 7.1300. The EU has provided no evidence from a legitimate benchmark as to the division of data rights in commercial transactions, or compared it to each transaction.

⁵²⁵ *US – Large Civil Aircraft (AB)*, para. 799.

⁵²⁶ EU FWS, para. 386.

⁵²⁷ 2006 CRA Report, p. 2 (Exhibit EU-29).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 99

percentages of each element were dual use.⁵²⁸ The EU then purported to identify the amount attributable to civil aircraft based on the percentage of Boeing’s revenue derived from civil aircraft.⁵²⁹ The United States showed that, where DoD data allowed a comparison with actual figures, the EU methodology consistently overestimated the amount attributable to Boeing by between 266 and 715 percent.⁵³⁰

296. The EU proposes the same methodology for valuing the alleged financial contribution in this proceeding – the same assumptions, the same authors (CRA), and the same basic calculations.⁵³¹ The only difference is that CRA has injected an additional consultant, Richard Rumpf, into the process. The addition of Rumpf has not improved the situation. The new estimates have the same flaws as the old.

297. First, the EU and CRA provide no definition of what, in their view, makes research “dual use.” The inquiry is completely subjective, based exclusively on the supposed expertise of Richard Rumpf.

298. Second, for an exercise that relies so heavily on the expertise of one individual, the EU provides no basis for the Panel to conclude that he has relevant expertise. In fact, Rumpf’s tenure at DoD ended in 1990,⁵³² which suggests that his knowledge may be somewhat outdated. In addition, Rumpf’s CV that his only background is in Navy military research.⁵³³ There is no suggestion that he has sufficient background with civil research to judge what is likely to be relevant to large civil aircraft.

299. Third, CRA and Rumpf simply assume that Boeing received payments from DoD under general research program elements that are proportionate to Boeing’s share of U.S. military aircraft sales.⁵³⁴ There is, of course, no basis for this assumption. DoD procures aeronautics research services from a number of sources outside of military aircraft producers, among them universities and producers of electronics.⁵³⁵

⁵²⁸2006 CRA Report, p. 3 (Exhibit EU-29).

⁵²⁹ Exhibit EU-37, p. 2.

⁵³⁰ *EC overestimate of DoD General Aviation RDT&E funding to Boeing* (Exhibit USA-0113) (original Exhibit USA-1252).

⁵³¹ *Compare* 2006 CRA Report (Exhibit EU-29) *with* CRA-Rumpf Report (Exhibit EU-23). Even the fonts, heading format, and table formats are the same.

⁵³² Rumpf CV, CRA-Rumpf Report, Annex E (Exhibit EU-23).

⁵³³ Rumpf CV, CRA-Rumpf Report, Annex E (Exhibit EU-23).

⁵³⁴ CRA-Rumpf Report, Annex C, p. 3 (Exhibit EU-23).

⁵³⁵ For one program element, 0601102F (entitled “Defense Research Sciences”), Rumpf attempts to calculate the value based on publicly available data from the website USASpending.gov for a category labeled “Defense Research Sciences.” CRA-Rumpf Report, p. 9 (Exhibit EU-23). However, Rumpf did not realize that USASpending does not aggregate its data on the basis of program elements. In fact, DoD does not report program-element-level data to that website. Rather, USASpending.gov reports data based on the Catalog of Federal

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 100

300. Fourth, the final step of the exercise attributes general research to large civil aircraft based on the sales revenue of BCA as a percentage of total Boeing revenue. There is no basis for this assumption, either. It is noteworthy that neither CRA nor Rumpf endorses this approach.

301. Fifth, the EU's methodology fails to reflect the crucial differences among the payments that it challenges. The original panel itself concluded that it could not accept the original CRA approach because it does "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."⁵³⁶

302. Thus, the EU's valuation methodology has no validity. The EU knows, from the original proceeding, that the methodology produces estimates wildly in excess of actual amounts, it is entirely subjective, and it requires a set of assumptions entirely at odds with reality. And, finally, the data produced does not accurately reflect recognized differences among DoD expenditures. Like the CRA approach from the original proceeding, the CRA-Rumpf approach fails entirely to meet the EU's burden of proof.

303. These errors are especially egregious because the EU had actual data before it. The United States submitted detailed data on obligations under contracts by the Air Force, Navy, DARPA, and DLA. The EU simply dismisses this information as not "useful," because it is "difficult . . . to understand" and supposedly reports "incorrect PE numbers."⁵³⁷ The EU provides no support for its allegation about incorrect PE numbers. In fact, the program elements reported in the U.S. data reflect either hard copy information submitted to the Panel or, where that was unavailable, DoD computer records.

304. As for the data being difficult to understand, that is the fault of the EU for failing to take the time to understand it. All of the data indicate clearly the contract, the applicable date of the expenditure, and the PE number that provided the funding. It is a large data set because the EU has brought a huge set of claims. That does not absolve the EU from its obligation as a complaining party to evaluate available information and present it to the Panel.

305. The EU's lack of effort to do this does not alleviate its burden of proof. Indeed, the EU's disregard of the facts raises the question of why it suggested that the Panel undertake the huge task of requesting the information from the United States.

Domestic Assistance classifications. Classification 12.800 is labeled "Defense Research Sciences," but in fact groups together spending under a number of program elements. Catalog of Federal Domestic Assistance, Number 12.800 (Exhibit USA-277).

⁵³⁶ *US – Large Civil Aircraft (Panel)*, para. 7.1206.

⁵³⁷ EU FWS, para. 371, note 990.

E. Measures Found Not to be Subsidies in the Original Proceeding: Payments and Access to Facilities under Procurement Contracts Funded through the Original 23 Program Elements

306. The EU strove throughout the original panel proceedings, and failed, to establish that DoD procurement contracts conferred a subsidy. It appealed the original panel’s legal reasoning, but did not ask the Appellate Body to complete the analysis and find that DoD procurement contracts conveyed an actionable subsidy. The EU thus abandoned its claim. There was accordingly no DSB recommendation that the United States withdraw any subsidy with regard to procurement contracts (as no such subsidy had been found to exist) or remove any adverse effects (which also had been found not to exist) caused by those measures.

307. The EU now appears before this Panel, and asks it to find that the United States failed to comply with recommendations and rulings that the DSB never made *because the EU did not ask it to do so*. This is, needless to say, a profoundly unfair position to take. The United States has requested a preliminary ruling that the procurement contracts are outside the scope of this proceeding. As the Panel has not yet taken action on, and without prejudice to, that request, this section addresses the EU’s subsidy allegation with respect to procurement contracts funded through the 23 original program elements.

308. The EU’s arguments regarding DoD procurement contracts are, on a substantive basis, wrong from beginning to end. The United States begins with initial issues. Section 1 explains why the EU is mistaken in arguing that these contracts are properly within the scope of this compliance proceeding. Section 2 explains that the EU fails to take into account a distinction among the program elements that the EU itself raised. Some of the program elements cover basic and applied research and advanced technology – what DoD calls “science and technology” or “S&T” contracts. (The EU uses the term “general research.”) Others cover development and enhancement of weapons systems. In DoD terms, these are “major programs.” The EU refers to them as “military aircraft” program elements. (For clarity, when the United States makes statements generally about these types of contracts, it will use the terms “S&T” and “major program.” When referring solely to program elements challenged by the EU, we will use the terms “general research” and “military aircraft” in quotation marks.)

309. As there are important differences between contracts funded under “general research” program elements and those funded under the “military aircraft” program elements, the United States addresses them separately. Section 3 begins by summarizing the terms of contracts funded through each of the program elements, which demonstrate that the research had a military objective, and that potential civil uses were not an objective. It then goes through the subsidy analysis for these contracts, demonstrating that they are not “akin to a species of joint venture,” but in fact are purchases of research services to assist DoD in developing technologies to be available for incorporation into products and processes to meet military needs. As shown in Section III.C.4.a, purchases of services are not a financial contribution. In any event, assuming *arguendo* that they are some form of financial contribution, they involve a purchase by DoD, which means that the proper standard for evaluating the existence of a benefit is whether Boeing

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 102

received more than adequate remuneration. The EU has presented nothing to suggest that this was the case, and DoD’s use of competitive bidding ensured it conferred no benefit through these transactions. Section 3 ends by explaining that when it comes to specificity, the EU incorrectly limits its analysis to DoD, when the Appellate Body has already found that the subsidy the EU alleges – the attribution to Boeing of more intellectual property rights than it would receive under a commercial transaction – must be assessed on a broader level, and is not specific.

310. Section 4 goes through the same analytical steps for contracts funded through the “military aircraft” program elements. The United States begins by evaluating the EU allegations respecting each program element, and observes that with the exception of the C-17, the EU has indicated a zero value for the financial contribution and, therefore, has not alleged the existence of a financial contribution. In any event, the available evidence shows that all of these program elements had the military objective of obtaining or enhancing DoD weapons systems, and that the development of technology with civil uses was not an objective. In some instances, where these contracts seek to procure a new weapon system or a component to integrate into an existing system, they are purchases of goods. In other instances, where they seek enhancement or upgrade of existing systems, they are purchases of services. As shown in Section III.C.4.a, purchases of services are not a financial contribution. In any event, assuming *arguendo* that they are some form of financial contribution, they involve a purchase by DoD, which means that the proper standard for evaluating the existence of a benefit is whether Boeing received more than adequate remuneration. The EU has presented nothing to suggest that this was the case, and DoD’s use of competitive bidding ensured it conferred no benefit through these transactions. Section 4 ends with a specificity analysis that tracks the analysis in Section 3.

311. Section 5 then addresses issues the EU raises with respect to intellectual property arising out of both types of contracts, demonstrating that it is quite rare for Boeing to gain patent rights because of its work for DoD. Moreover, the large majority of Boeing’s intellectual property portfolio comes from work conducted outside of government contracts.

312. The EU makes several legal errors that are common to both types of contract. With respect to the financial contribution, it seeks to meet its burden of proof with a one-sentence assertion that procurement contracts “have these same characteristics” as assistance instruments. This cursory effort clearly does not give the Panel enough to “thoroughly scrutinize the measure” or to “identify *all* relevant characteristics of the measure,”⁵³⁸ which is what is necessary to establish the existence of a financial contribution. Moreover, the evidence contradicts the EU’s assertion that DoD procurement contracts are “akin to a species of joint venture.”⁵³⁹ When DoD commissions general research, it does not engage in a collaborative exercise. DoD identifies military needs based on entirely internal processes, seeks contractors who can serve those needs, and decides which contractor to choose based on the technical quality of the proposal and its cost. When DoD seeks to acquire new weapons systems, it conducts another entirely internal

⁵³⁸ *US – Large Civil Aircraft (AB)*, para. 586, quoting *China – Auto Parts (AB)*, para.171 (emphasis in original).

⁵³⁹ EU FWS, para. 366.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 103

process to determine its performance requirements, and then conducts a competition to find the contractor who provides the best combination of technical merit and cost. At no point in the process do the contractors' desires or business objectives play a role in the process. The *only* consideration is to get the best deal for DoD.

313. The EU's errors in the financial contribution analysis preordain the failure of its benefit analysis. The EU starts from the incorrect premise that the transactions are all joint ventures, necessarily resulting in the choice of the wrong benchmark. The EU compounds that error by failing to take account of the bidding process that DoD used on most of the contracts at issue in this dispute. Choosing the right benchmarks – commercial purchases of services for general research contracts and commercial purchases of large specialized equipment or upgrades of existing equipment for systems acquisition contracts – and taking account of the price-finding effects of competitive bidding leads to the conclusion that these contracts conferred no benefit.

314. Finally, in its analysis of specificity, the EU fails to recognize that the benefit it alleges – allocation of rights in patents – has already been found to be non-specific by the Appellate Body. The EU's argument is essentially that this non-specific measure becomes specific to the recipient simply because it is executed through a document (the contract or agreement) between the government and the recipient. But that cannot be right. If it were, any subsidy would, in the act of conveying it to the recipient, become specific, thereby rendering Article 2 of the SCM Agreement inutile.

- 1. These contracts were not covered by the recommendations and rulings of the DSB, and are not closely related to the measures found to be WTO-inconsistent, so DoD properly took no measures to comply with respect to these contracts.***

315. The first point in the analysis is that, as explained in Section III.B.2, procurement contracts funded through the old program elements are not within the Panel's terms of reference.

- 2. The EU recognizes that science and technology contracts (which the EU calls "general RDT&E") are different from systems acquisition contracts (which the EU calls "military aircraft RDT&E"), but fails to reflect that difference properly in the analysis***

316. The EU is basically correct in distinguishing between "general RDT&E" and RDT&E related to specific military aircraft, although it uses the wrong terminology. The two categories reflect an important divide in DoD's contracting activities between science and technology ("S&T") on the one hand, and systems acquisition on the other. S&T consists of basic research to gain knowledge and understanding, applied research to identify technologies that the knowledge might enable, and then finally advanced technology development to evaluate how technologies work together and perform in a relevant environment. The key link among these types of research is that DoD is seeking knowledge or generalized technology options in support of current and future military missions – they do not have the objective of purchasing a particular system. In contrast, systems acquisition begins once DoD decides that it has a need for a

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 104

particular system and has developed performance criteria (in DoD parlance, a “requirement”) for that system. At that point, development work is wrapped up in the process of purchasing a good for use by the warfighter.

317. While the EU implicitly recognizes this divide, it fails to reflect that fact in its analysis. Thus, for the EU, all contracts are essentially the same as each other, and the same as assistance instruments. However, there are important differences among assistance agreements, S&T contracts, and systems acquisition contracts that must be taken into account in any analysis that seeks to “thoroughly scrutinize the measure” and “identify *all* relevant characteristics of the measure,” as is necessary to determine whether a financial contribution exists.⁵⁴⁰ Section III.E.3.c below will address the error of treating procurement contracts the same as cooperative agreements, TIAs, and OTAs. This section will focus on the important differences between S&T contracts and systems acquisition contracts.

318. The S&T process is managed by the research operations within DoD, such as Air Force Research Laboratory (“AFRL”) for the U.S. Air Force and the Office of Naval Research (“ONR”) for the U.S. Navy. As the S&T PE numbers challenged by the EU are primarily in the Air Force sphere, AFRL provides the best example of how S&T acquisition works. There are two primary inputs: user needs and technology opportunities or resources. AFRL obtains information on user needs from a variety of sources. The Secretary of Defense issues Defense Planning Guidance, which is supplemented by various service documents and strategic priority documents identifying future missions and capabilities that warfighters will need to accomplish those missions. AFRL managers are also expected to remain aware of the various roles the Air Force performs in support of national defense. AFRL obtains information on technology opportunities or resources by instructing its officials to remain up-to-date on the state of the art in all of the fields relevant to the Air Force, such as aerospace systems, air vehicles, space vehicles, directed energy devices, information systems, materials and manufacturing processes, munitions, and sensors. Scientists review academic literature and attend conferences to stay abreast of the latest developments.

319. Based on these inputs, AFRL issues a Program Objective Memorandum each year, which forms the basis for an annual Corporate Investment Strategy that sets the balance between basic research, applied research, and advanced technology development. (These generally correspond to TRL 1 through 6 on NASA’s scale.) It also sets levels of S&T spending for different technology areas. Within this framework, AFRL decides for each S&T objective whether to conduct the necessary research in-house, or to acquire the research from external sources, such as industry or academia. In the case of acquisition, AFRL must then decide whether the objective is within the scope of an existing effort, whether it can be handled through a follow-on effort, or whether it requires a new effort. That decision will then guide the choice of an acquisition strategy. AFRL may issue a Broad Agency Announcement,⁵⁴¹ which sets out a research

⁵⁴⁰*US – Large Civil Aircraft (AB)*, para. 586, quoting *China – Auto Parts (AB)*, para.171 (emphasis in original).

⁵⁴¹ DARPA also uses BAAs and may use a similar document, which it calls a “research announcement,” for assistance instruments only.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 105

objective and invites white papers or proposals as to how to achieve that goal. It might also issue an RFP that provides more direction as to how to achieve the research objective. These processes are all subject to competitive bidding, except in limited circumstances outlined in laws and regulations, such as when one supplier has unique capabilities. AFRL evaluates all responses based on, at a minimum, technological merit, contribution to agency mission, and cost realism, and then chooses the offer that provides the best combination of all of them. The objective is to create a competition of ideas that encourages all participants to provide the most innovative and compelling answers to the technology questions posed. These competitions are open to any and all participants, within the bounds of statute and regulation, who can provide technically superior and innovative solutions. While AFRL is used as an example here, a similar discussion applies to all DoD research organizations.

320. Effort under S&T contracts typically revolves around researching a specific scientific or engineering question, developing technology on the basis of the resulting knowledge or understanding, or testing application of a particular principle in a particular environment. The deliverable will typically be a report or a briefing on the results of the work, or in some instances a test article or technology prototype for further evaluation by DoD. The objective is not to acquire a system, but to study the problem presented so the knowledge gained in doing so can be used to solve broad problems or provide technology options for future systems acquisition.

321. The systems acquisition process works differently, subject to a number of statutory and regulatory requirements. There are four stages, divided by three formal “milestones” for determining whether an acquisition is ready to move forward:

Milestone A: initiation of technology development

Milestone B: initiation of engineering and manufacturing development

Milestone C: initiation of production and deployment

The process begins with the decision identification of a capability need that must be addressed. Identifying such needs falls to the Joint Capabilities Integration and Development System (“JCIDS”), which is primarily managed by the Joint Staff and military services. The services and other DoD components conduct studies to determine gaps in warfighter capabilities or other risks. If a gap is significant, the relevant authorities will generate a capability requirement. If the relevant military service validates the capability requirement, the authorities then decide whether that requirement can best be met by a “materiel” (essentially meaning software- or hardware-based) solution or a non-materiel solution (doctrine, organization, training, leadership, personnel, and facilities). For a materiel-based solution, the JCIDS generates a capability requirement defining what sort of system and the performance criteria to meet that need. The Joint Requirements Oversight Council then evaluates the requirement and, if approved, prioritizes it against other requirements.⁵⁴²

⁵⁴² Chairman of the Joint Chiefs of Staff Instruction 3170.01, p. A-4 (Exhibit USA-0114).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 106

322. Once a requirement has been approved, the matter moves into the Defense Acquisition System (“DAS”), which is managed by the Under Secretary for Acquisition, Technology and Logistics. If existing technology is sufficiently mature to implement all of the objectives in the requirement, the acquisition moves directly to Milestone B, and the DAS crafts an acquisition strategy to purchase the necessary goods. If the technology is not fully ready, DoD will start at Milestone A and devise an acquisition strategy to develop the technology needed to fulfill the requirement. The existence of a requirement means that the development process is not an S&T function, but rather a directed research and development effort aimed at acquiring a specific good. During this phase, technologies are developed, matured, and tested. To be considered mature enough for product development, technologies must be tested and demonstrated in a “relevant” or preferably, “operational” environment.⁵⁴³ This phase may also involve competitive prototyping, with competing industry teams developing competing prototypes of a required system.⁵⁴⁴ Once all of this effort is complete, the relevant military services or other DoD components will develop a detailed requirement, which can contain many thousands of performance criteria. Acquisition authorities will develop an acquisition strategy for the next step, including the type of contract it will use to acquire the system.

323. Effort to move a system from Milestone A to Milestone B will often involve technology development or testing activities. However, the nature of the effort is different than under an S&T contract because the contract calls for meeting the specific criteria in a requirement and demonstrating them in an environment that reflects or simulates actual conditions of use. The work is not theoretical in nature, but highly practical and directed.

324. When all of this is done, and the program is fully funded, it will satisfy the requirements of Milestone B, DoD will formally initiate an acquisition “program,” and the process will move into engineering and manufacturing development. In this stage, DoD will conduct an acquisition process to choose a contractor to produce the system, and that contractor will integrate the technologies and capabilities into a single system and prepare manufacturing processes. A program office will be created for overseeing execution of the contract, and it will be responsible for ensuring that the contractor completes the work in the appropriate amount of time. The contractor will generally produce one or more full prototypes, which DoD will then test to ensure that the system meets the performance and other requirements.⁵⁴⁵ When all of this is complete, the system is shown to be affordable, and it has received full funding, the program will pass Milestone C and move into production and deployment.

⁵⁴³ Advanced technology development under an S&T contract may also involve testing in an “environment” described as “relevant”. However, the process of choosing a relevant environment is different. On a program of record, the environment will need to be specific to the particular system DoD seeks to acquire. Under an S&T contract, the relevant environment is much more generalized, and the choice is not directed at fitting the technology to a set of requirements.

⁵⁴⁴ Congressional Research Service, *Defense Acquisitions: How DoD Acquires Weapon Systems and Recent Efforts to Reform the Process*, p. 8 (Jan. 2, 2013) (Exhibit USA-0115).

⁵⁴⁵ Congressional Research Service, *Defense Acquisitions: How DoD Acquires Weapon Systems and Recent Efforts to Reform the Process*, pp. 9-10 (Jan. 2, 2013) (Exhibit USA-115).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 107

325. Some of the effort in the engineering and manufacturing development phase will involve development activities, particularly with regard to integrating multiple technologies into a functioning whole and devising a production process that ensures the necessary quality at an affordable price. Once again, that effort is highly focused on addressing specific problems with a particular product.

326. Once DoD has developed and purchased a system, it generally continues to use that system for an extended period of time. Thus, one potential response to a capability need would be to upgrade or modify an existing system to add up-to-date technology or other types of improvements. This will involve purchasing new equipment and adding it to an existing system, or modifying the existing system. Again, any research and development activities are focused on the specific problem of making that system, and not on enhancing generalized knowledge.

327. Thus, there are critical differences between S&T contracts and systems acquisition contracts, both in terms of the nature of the work performed and the entities that oversee the process. Any proper analysis of whether these contracts conferred a financial contribution would have to take those differences into account. The EU's failure to do so, which we will describe in subsequent sections, means that it has failed to meet its burden of proof.

3. *The EU has failed to establish that DoD research contracts funded through the “general research” program elements are a financial contribution that confers a benefit.*

a. DoD S&T contracts are driven by military needs and objectives, and have a value much less than alleged by the EU

328. The EU asserts that DoD paid Boeing \$463 million (including access to DoD facilities) in the 2007-2012 period to conduct “dual-use” research under the original “general research” program elements,⁵⁴⁶ and that these programs assisted Boeing's production and development of large civil aircraft. All aspects of this statement are incorrect. DoD payments to Boeing under the program elements in question were vastly smaller than alleged by the EU – approximately \$[BCI].⁵⁴⁷ The contracts show that all of the research was military in nature, designed to provide additional knowledge for the U.S. Air Force and U.S. Navy to perform their military duties. There was no “dual use” involved.

i. Defense Research Sciences (PE 0601102F)

329. The EU asserts that it can identify transactions funded through this program element using publicly available information.⁵⁴⁸ The EU is mistaken. As explained above, the website

⁵⁴⁶ CRA-Rumpf Report, Annex C, p. 3 (Exhibit EU-3).

⁵⁴⁷ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)); *Funds obligated to Air Force agreements with Boeing, FY2007-FY2012, by program element* (Exhibit USA-108(BCI)).

⁵⁴⁸ EU FWS, para. 248.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 108

used by the EU consultants, USASpending.gov, does aggregate DoD spending in a category labeled “Defense Research Sciences,” but this corresponds to category 12.800 of the Catalog of Domestic Assistance. Although the headings are the same, the scope of category 12.800 is different. Thus, it includes cooperative agreements that received their funding exclusively through other program elements, such as FA8650-07-2-7716 (funded through 0602715E), FA8650-05-2-3503 (funded through 0609120J), and FA8650-11-2-7127 (funded through 0602305E). The mistake may be understandable, but the EU’s supposition that these contracts received funding through PE0601102F is wrong.

330. This program element, in fact, funds primarily research by universities and the Air Force’s own laboratories, and payments to Boeing were relatively small, with only [BCI] in the 2007-2012 period.⁵⁴⁹ In line with the basic nature of research under this category, unless the topic is classified, the results are unrestricted. The titles alone indicate the military nature of the research:

- “Laser Application Support and In-House Research and Development” (FA9451-08-D-0179, DO 4 and 5);
- “Advanced Electric Laser” (FA9451-08-D-0179, DO 6);
- “Deep Space Imaging for Space Technology” (FA9453-12-C-0129); and
- “Robust Adaptive Control of Long Range Strike and Advanced Weapons” (FA9550-07-C-0051).

331. The laser research under Contract FA9451-08-D-0179, delivery order 4, provides a good example of the military nature of this work. Funding under this program element had the objective of [[HSBI]]⁵⁵⁰ There is no mention of commercial applications for the technologies. In fact, the only reference to commercial technology is the instruction to use [[HSBI]]⁵⁵¹ Thus, to the extent civil technology is even in the picture, the objective is to re-purpose it for military use, and not to develop new civil applications.

332. The total value of payments to Boeing for procurement contracts under this PE was approximately [BCI] in the 2007-2012 period.⁵⁵²

⁵⁴⁹ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

⁵⁵⁰ FA9451-08-D-0179, Task 4, SOW, p. 2, frame 9/34 (Exhibit USA-0117(HSBI)).

⁵⁵¹ FA9451-08-D-0179, Task 4, SOW, p. 1, frame 8/34 (Exhibit USA-0117(HSBI)).

⁵⁵² *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 109

ii. Materials (PE 0602102F)

333. The EU cites a 1995 report on dual use technology for the proposition that materials developed for the military can have civil applications.⁵⁵³ As should be obvious, that observation applies to a situation that is now 18 years out of date. Boeing received no payments during the FY2007-FY2012 period under DoD’s traditional dual-use programs, DUS&T and ManTech. This program element funded six contracts with Boeing during that period, all aimed strictly at military targets.

334. Two contracts provide good examples of the work conducted under this program element in FY2007-FY2012. Contract FA8650-11-C-5212 called for research into a high-temperature lightweight CMC truss core [[**HSBI**]]⁵⁵⁴ Contract FA8650-11-C-5215 called for research into tailorable ceramic micro-truss development. It specified that [[**HSBI**]]⁵⁵⁵ Neither contract would realistically apply to technologies for civil applications for these materials or materials systems. Furthermore, the contracts are not based on underlying or commercial technology relevant to the effort.

335. The total value of payments to Boeing for procurement contracts under this PE was approximately [**BCI**] in the 2007-2012 period.⁵⁵⁶

*iii. Aerospace Flight Dynamics/Aerospace Vehicle Technologies
(PE0602201F)*

336. This program element funded more contracts and tasks than any other program element with Boeing during the 2007-2012 period. They covered a wide range of research topics, but all of them were similarly focused on military objectives, and not potential civil uses. In some instances, the title reveals the military objective beyond any doubt:

- “Revolutionary Hunter-Killer Design Development (F33615-00-D-3052, D.O. 74)
- “Integrated Air Vehicle Self Defense Concept Definition Study (F33615-00-D-3052, D.O. 82)
- “Automated Aerial Refueling Equivalent Model 2 Design Program (F33615-00-D-3052, D.O. 90)

⁵⁵³ EU FWS, para. 250, *quoting* Dual Use Technology: A Defense Strategy for Affordable, Leading-Edge Technology, p. 10 (Feb. 1995) (Exhibit EU-280).

⁵⁵⁴ Contract FA8650-11-C-5212 (Exhibit USA-118(HSBI)).

⁵⁵⁵ Contract FA8650-11-C-5215, SOW, p. 1 (Exhibit USA-119(HSBI)).

⁵⁵⁶ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 110

- “Integrated Air Vehicle Self Defense Sensor Integration Analyses” (F33615-00-D-3052, D.O. 93)
- “Nonlinear Methods for Aeroservoelastic Design and Analysis of Intelligence, Surveillance, and Reconnaissance” (FA8650-08-D-3857, D.O. 2 and D.O. 3)
- “Directed Energy Beam Improvement by Expanding the Field of Regard” (FA8650-08-D-3857, D.O. 4)
- “Guidance and Control System Development for Subscale Scramjet-Powered Hypersonic Vehicles” (FA8650-08-D-3857, D.O. 24)
- “Advance Air Vehicle System Integration and Technology Analysis for Next Generation Tactical Air” (FA8650-08-D-3857, D.O. 25)
- “Lighter than Air and Hybrid Aircraft Concept Assessment Tool Development (FA8650-08-D-3857, D.O. 27)
- SARL Wind Tunnel Testing of Modified ATL {Advanced Tactical Laser} Turrets” (FA9451-08-D-0186, D.O. 3)

337. For other contracts, the description of the work reveals a military objective not obvious from the title. For example:

- “{D}evelop a robust, integrated, automated aerial refueling (AAR) and sense-and-avoid) (SSA) capability to be used by the Next Generation Long Range Strike (NGLRS) vehicle.”⁵⁵⁷
- **[[HSBI]]**⁵⁵⁸
- **[[HSBI]]**⁵⁵⁹
- **[[HSBI]]**⁵⁶⁰
- **[[HSBI]]**⁵⁶¹
- **[[HSBI]]**⁵⁶²

⁵⁵⁷ Contract F33615-00-D-3052, D.O. 75 (Exhibit USA-120(HSBI)).

⁵⁵⁸ Contract F33615-00-D-3052, D.O. 83 (Exhibit USA-121(HSBI))

⁵⁵⁹ Contract F33615-00-D-3052, D.O. 85, Modification 3, SOW (Exhibit USA-122(HSBI), frame 6/22)

⁵⁶⁰ Contract F33615-00-D-3052, D.O. 87, p. 5 (Exhibit USA-123(HSBI)).

⁵⁶¹ Contract F33615-00-D-3052, D.O. 89 (Exhibit USA-124(HSBI)).

⁵⁶² Contract F33615-00-D-3052, D.O. 93 (Exhibit USA-125(HSBI))

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 111

- “The result will be a clear definition of the ADVENT propulsion system integration technologies which provide the U.S. warfighter with the most benefit.”⁵⁶³
- **[[HSBI]]**⁵⁶⁴
- “[I]ncludes engineering design and analyses of integrated inlet/engine/power and thermal management / exhaust systems for the material concept of the Next Generation Air Dominance system.”⁵⁶⁵
- The long-term objectives of this research are to achieve long-range supersonic flight (Mach numbers from 2.0 to 4.0) in survivable strike aircraft and missile concepts.”⁵⁶⁶
- **[[HSBI]]**⁵⁶⁷
- **[[HSBI]]**⁵⁶⁸
- **[[HSBI]]**⁵⁶⁹

None of these contracts or delivery orders indicates any interest in civil uses for these technologies.

338. Against this massive record of military objectives, the EU highlights seven delivery orders. It for the most part fails even to explain why it considers them relevant to the Panel’s inquiry. In fact, like the instruments discussed above, they provide additional evidence of the military objectives of DoD research, and the unimportance of potential civil uses in that research.

339. The EU observes that the Air Force sponsored two tasks designed to **[[HSBI]]**.⁵⁷⁰ The military use of these technologies is obvious – DoD has a large number of high-performance composite aircraft that undergo incredible stresses in their missions. These contracts make no mention of civil use of the technology.

⁵⁶³ Contract F33615-03-D-2358, D.O. 5 (Exhibit USA-126(HSBI))

⁵⁶⁴ Contract FA8650-06-C-3623 (Exhibit USA-127(HSBI)).

⁵⁶⁵ Contract FA8650-07-D-2799, D.O. 5 (Exhibit USA-128(HSBI)).

⁵⁶⁶ Contract FA8650-08-D-3857, D.O. 5 (Exhibit USA-129(HSBI)).

⁵⁶⁷ Contract FA8650-08-D-3857, D.O. 6 (Exhibit USA-130(HSBI)).

⁵⁶⁸ Contract FA8650-08-D-3857, D.O. 26 (Exhibit USA-131(HSBI)).

⁵⁶⁹ Contract FA8650-08-D-3857, D.O. 28 (Exhibit USA-132(HSBI)).

⁵⁷⁰ F33615-00-D-3052, D.O. 79, p. 5 (Exhibit USA-133(HSBI)); FA8650-08-D-3857, D.O. 10, SOW, p. 3 (Exhibit USA-134(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 112

340. The EU notes that Contract F33615-00-D-3052, D.O. 92, called on Boeing to identify verification and validation methods [[HSBI]]⁵⁷¹ [[HSBI]]. The EU also observes that D.O. 94 of the same contract calls for development of a more energy-efficient configuration of its blended wing body concept. The military utility of this research is obvious, as DoD is evaluating the use of new aircraft configurations for future military aircraft. The delivery order does not mention any potential civil use for this technology. The EU notes that Contract F33615-00-D-3052, D.O. 73 provides for the development of software to reduce the cost of maintaining the C-17, with the “secondary goal” being “to provide software tools that could be transitioned to other military and commercial aircraft maintenance and management systems.”⁵⁷² However, the delivery order makes clear that the expected use was not by Boeing, [[HSBI]].⁵⁷³

341. Contract FA8650-08-D-3857, D.O. 3 called for [[HSBI]]⁵⁷⁴ [[HSBI]]. D.O. 28 of that contract tasked Boeing “to identify any potential future or major modification of existing air vehicle systems and the corresponding key enabling air vehicle science and technology required to meet the perceived Air Force requirements through 2030 timeframe. As noted above, the areas of focus were [[HSBI]] – all exclusively military applications. The EU, however, asserts that the contract called on Boeing to use a commercial aircraft to flight test some of the candidate technologies by [[HSBI]]⁵⁷⁵ However, the EU has muddled the facts. The delivery order provided for [[HSBI]]⁵⁷⁶ The modification does not indicate any potential civil use for these additions to the test aircraft or for any knowledge acquired by making them.

342. The total value of payments to Boeing for procurement contracts under this PE was [BCI] in the 2007-2012 period.⁵⁷⁷

iv. Aerospace Propulsion (PE 0602203F)

343. The EU asserts that power electronics technologies researched with funding under this program “have dual-use applications.”⁵⁷⁸ Other than similarly conclusory statements from the 2006 CRA Report, the EU cites no evidence of such benefits, and makes no reference to the contracts actually funded under this program. A review of those contracts, the only real evidence of what Boeing received and what it did, reveals that they were focused on military objectives, and not potential civil uses.

⁵⁷¹ EU FWS, para. 253.

⁵⁷² Contract F33615-00-D-3052, D.O. 73, (Exhibit USA-135(HSBI), frame 6/31).

⁵⁷³ Contract F33615-00-D-3052, D.O. 73, (Exhibit USA-135(HSBI), frames 12-12/31).

⁵⁷⁴ Contract FA8650-08-D-3857, D.O. 3, SOW, p. 2 (Exhibit USA-253(HSBI)).

⁵⁷⁵ EU FWS, para. 253.

⁵⁷⁶ Contract FA8650-08-D-3857, D.O. 3, Modification 1, SOW, pp. 6-7 (Exhibit USA-253(HSBI)).

⁵⁷⁷ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

⁵⁷⁸ EU FWS, para. 255.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 113

344. The statements of work demonstrate the military objective.⁵⁷⁹

- “The result will be a clear definition of the ADVENT propulsion system integration technologies which provide the U.S. warfighter with the most benefit.”⁵⁸⁰
- “{T}he program is structured to assess the impact of ADVENT technologies on five future vision system vehicles: Subsonic Strike, Notional UCAS, Mobility, ISR {Intelligence, Surveillance, and Reconnaissance}, and Supersonic Strike vehicles.”⁵⁸¹
- **[[HSBI]]**⁵⁸²
- **[[HSBI]]**⁵⁸³
- **[[HSBI]]**⁵⁸⁴
- **[[HSBI]]**⁵⁸⁵
- “The objective of this program is to conduct studies to evaluate the affects of Fischer-Tropsch jet fuels on military aircraft that include performance, safety, durability, and reliability/maintainability of modern military aircraft.”⁵⁸⁶
- **[[HSBI]]**⁵⁸⁷

None of the contracts reference potential civil uses.

345. The total value of payments to Boeing for procurement contracts under this PE was **[BCI]** in the 2007-2012 period.⁵⁸⁸

⁵⁷⁹ Many of the contracts funded under this program element also received funding under PE 0603216F, titled “Aerospace Power and Propulsion Technology.”

⁵⁸⁰ Contract F33615-03-D-2358, D.O. 5 (Exhibit USA-126(HSBI)).

⁵⁸¹ Contract FA8650-07-D-2799, D.O. 1, SOW, p. 1 (Exhibit USA-136(HSBI)).

⁵⁸² Contract FA8650-09-C-2002 (Exhibit USA-137(HSBI), frame 60/61).

⁵⁸³ Contract FA8650-09-d-2928, D.O. 1 (Exhibit USA-138(HSBI)).

⁵⁸⁴ ContractFA8650-09-D-2928, D.O. 5 (Exhibit USA-139(HSBI)).

⁵⁸⁵ Contract F33615-03-D-2358, D.O. 5 (Exhibit USA13-126(HSBI)).

⁵⁸⁶ Contract F33615-03-D-2358, D.O. 6 (Exhibit USA13-140(HSBI)).

⁵⁸⁷ Contract F33615-03-D-2358, D.O. 7 (Exhibit USA13-0141(HSBI)) (USA13-205).

⁵⁸⁸ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 114

v. Aerospace Avionics/Aerospace Sensors (PE 0602204F)

346. The EU asserts that sensor technologies researched with funding under this program “benefits the US LCA industry.”⁵⁸⁹ Other than similarly conclusory statements from the 2006 CRA Report, the EU cites no evidence of such benefits, and makes no reference to the contracts actually funded under this program. A review of those contracts, the only real evidence of what Boeing received and what it did, reveals that they were focused on military objectives, and not potential civil uses.

347. Boeing had only one contract during the 2007-2012 period funded by this program element, Contract FA8650-09-C-1658. Its objective was “to demonstrate the ability of metamaterials to improve antenna design for realistic military application scenarios. The application scenario used for the program has been chosen so that advances within antenna technology will provide additional DOD mission capability.”⁵⁹⁰ There is no indication of potential civil use. Boeing received [BCI] for the work.⁵⁹¹

vi. Dual Use Science and Technology (PE 0602805F)

348. Boeing received no funding under this project element in the 2007-2012 period.

vii. Advanced Materials for Weapons Systems (PE0603112F)

349. Research under this program element seeks exactly what its title indicates – improvements to weapons systems. A review of the three contracts that received this funding from 2007-2013, the only real evidence of what Boeing received and what it did, reveals that they were indeed focused on developing weapons, and not potential civil technologies.

350. Contract FA8650-11-C-5212 called for research into a high-temperature lightweight CMC truss core [[HSBI]]⁵⁹² Contract FA8650-11-C-5215 called for research into tailorable ceramic micro-truss development. It specified that [[HSBI]]⁵⁹³ Neither contract refers to civil applications for these materials, or commercial technology relevant to the effort.

351. The EU notes that the other contract, FA8650-08-C-5213, called for a prototype portable NDI/E system able to inspect remote access areas within an aircraft structure.⁵⁹⁴ Of course, such equipment would be immensely useful to DoD, which has a huge number of high-performance

⁵⁸⁹ EU FWS, para. 256.

⁵⁹⁰ Contract FA8650-09-C-1658 (Exhibit USA-142(HSBI), frame 36/49).

⁵⁹¹ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element* (Exhibit USA-116(BCI)).

⁵⁹² Contract FA8650-11-C-5212 (Exhibit USA-118(HSBI)).

⁵⁹³ Contract FA8650-11-C-5215, SOW, p. 1 (Exhibit USA-119(HSBI)).

⁵⁹⁴ EU FWS, para. 261, *citing* Contract FA8650-08-C-5213 (Exhibit USA-143(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 115

aircraft with serious maintenance needs. The EU omits that this device was customized for one of those aircraft: “Boeing will manage the project, demonstrate novel probe-structure attachments, and ensure system design supports F-22 needs.”⁵⁹⁵ Immediately after the discussion, the EU quotes from budget documents regarding “needed initial incentives for their industrial development.”⁵⁹⁶ It is difficult to see the relevance of this observation, as Boeing’s contracts do not contain such provisions. In any event, given the focus of this program element on weapons systems, the quotation likely refers to production for DoD.

352. The total value of payments to Boeing for procurement contracts under this PE was [BCI] in the 2007-2012 period.

viii. Flight Vehicle Technology (0603205F)

353. The EU concedes that DoD has stopped funding this program,⁵⁹⁷ so it is difficult to see the relevance of its inclusion in the EU first written submission.

*ix. Aerospace Structures/Aerospace Technology Dev/Demo (PE
0603211F)*

354. The EU asserts that technology researched with funding under this program “benefits the US LCA industry.”⁵⁹⁸ Other than similarly conclusory statements from the 2006 CRA Report, the EU cites no evidence of such benefits, and makes no reference to the contracts actually funded under this program. A review of those contracts, the only real evidence of what Boeing received and what it did, reveals that they were focused on military objectives, and not potential civil uses.

355. Contract FA8650-08-D-3857, D.O. 12, called for [[HSBI]].⁵⁹⁹ Potential applications include ISR, strike, and reusable launch vehicles. Contract FA8650-08-D-3857, D.S. 29, studied precision airdrop from the C-130 and C-17, both military transport aircraft,⁶⁰⁰ while Contract FA8650-08-D-3857, D.O. 30 studied [[HSBI]].⁶⁰¹ Research under Contract FA8650-08-D-3857, D.O. 32, involved [[HSBI]].⁶⁰² These are uniformly military objectives, and the contracts make no mention of any potential civil use of the technology, nor is any realistic civil use plausible.

⁵⁹⁵ Contract FA8650-08-C-5213, SOW, p. 1 (Exhibit USA-143(HSBI)).

⁵⁹⁶ EU FWS, para. 261.

⁵⁹⁷ EU FWS, para. 264.

⁵⁹⁸ EU FWS, para. 265.

⁵⁹⁹ Contract FA8650-08-D-3857, D.O. 12, SOW, p. 3 (Exhibit USA-144(HSBI)).

⁶⁰⁰ Contract FA8650-08-D-3857, D.O.29, SOW (Exhibit USA-145(HSBI)).

⁶⁰¹ Contract FA8650-08-D-3857, D.O. 30, SOW, p. 1 (Exhibit USA-254(HSBI)).

⁶⁰² Contract FA8650-08-D-3857, D.O. 32, SOW, p. 1 (Exhibit USA-146(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 116

356. The total value of payments to Boeing for procurement contracts under this PE was [**BCI**] in the 2007-2012 period.⁶⁰³

x. Aerospace Propulsion and Power Technology (PE 0603216F)

357. The EU asserts that technology researched with funding under this program “benefits the US LCA industry.”⁶⁰⁴ Other than similarly conclusory statements from the 2006 CRA Report, the EU cites no evidence of such benefits, and makes no reference to the contracts actually funded under this program. A review of those contracts, the only real evidence of what Boeing received and what it did, reveals that they were focused on military objectives, and not potential civil uses.

358. The statements of work of these contracts reveal their military objectives⁶⁰⁵:

- “[I]ncludes engineering design and analyses of integrated inlet/engine/power and thermal management / exhaust systems for the material concept of the Next Generation Air Dominance system.”⁶⁰⁶
- “[T]he program is structured to assess the impact of ADVENT technologies on five future vision system vehicles: Subsonic Strike, Notional UCAS, Mobility, ISR {Intelligence, Surveillance, and Reconnaissance}, and Supersonic Strike vehicles.”⁶⁰⁷
- [[**HSBI**]]⁶⁰⁸
- “The objective of this program is to conduct studies to evaluate the affects of Fischer-Tropsch jet fuels on military aircraft that include performance, safety, durability, and reliability/maintainability of modern military aircraft.”⁶⁰⁹

None of the contracts reference potential civil uses.

359. The total value of payments to Boeing for procurement contracts under this PE was [**BCI**] in the 2007-2012 period.⁶¹⁰

⁶⁰³ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element (Exhibit USA-116(BCI)).*

⁶⁰⁴ EU FWS, para. 265.

⁶⁰⁵ Many of the contracts funded under this program element also received funding under PE 0603203F, titled “Aerospace Propulsion.”

⁶⁰⁶ Contract FA8650-07-D-2799, D.O. 5 (Exhibit USA-128(HSBI)).

⁶⁰⁷ Contract FA8650-07-D-2799, D.O. 1, SOW, p. 1 (Exhibit USA-136(HSBI)).

⁶⁰⁸ Contract F33615-03-D-2358, D.O. 5 (Exhibit USA13-126(HSBI)).

⁶⁰⁹ Contract F33615-03-D-2358, D.O. 6 (Exhibit USA13-140(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 117

xi. Flight Vehicle Technology Integration (PE 0603245F)

360. Boeing received no funding under this project element in the 2007-2012 period.

xiii. RDT&E for Aging Aircraft (PE 0605011F)

361. The EU asserts that technology researched with funding under this program “benefits the US LCA industry.”⁶¹¹ Other than similarly conclusory statements from the 2006 CRA Report, the EU cites no evidence of such benefits, and makes no reference to the contracts actually funded under this program. A review of those contracts, the only real evidence of what Boeing received and what it did, reveals that they were focused on military objectives, and not potential civil uses.

362. The EU notes that DoD ceased funding this program element in 2009. As a consequence, it funded only three new instruments during the 2007-2012 period, all of them related to bomb racks on the F-16 fighter. The statement of work to Contract FA8681-06-D-0021, D.O. 9, explains:

Air Combat Command has an operational requirement to deploy smart munitions on the TER-9A multiple ejector bomb rack. The 656th Aeronautical System Squadron will procure test assets and conduct qualification testing of an Enhanced Smart Triple Ejector Rack (ESTER). The ESTER will consist of the retrofit of existing inventory TER-9A racks with relevant components and software to allow for smart or conventional weapon use. This rack will then be integrated with the F-16 platform, deployed with the GBU-38 JDAM.⁶¹²

D.O. 18 of the same contract [[HSBI]].⁶¹³ Contract FA8681-07-C-0002 included a contract line for [[HSBI]].⁶¹⁴

363. The contracts reference no potential civil use for this technology.

364. The total value of payments to Boeing for procurement contracts under this PE was [BCI] in the 2007-2012 period.⁶¹⁵

⁶¹⁰ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element (Exhibit USA-116(BCI)).*

⁶¹¹ EU FWS, para. 269.

⁶¹² Contract FA861-06-D-0021, D.O. 9, Attachment 1, p. 1 (Exhibit USA-147(HSBI)).

⁶¹³ Contract FA861-06-D-0021, D.O. 18, p. 2 (Exhibit USA-148(HSBI)).

⁶¹⁴ Contract FA8681-07-C-0002, pp. 3 and 9 (Exhibit USA-149(HSBI)). The United States notes that this particular expenditure covers a purchase of goods, which is outside the scope of the EU’s claims. We include it exclusively for information purposes.

⁶¹⁵ *Funds obligated under Air Force contracts with Boeing, FY2007-FY2012, by program element (Exhibit USA-116(BCI)).*

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 118

*xiii. Manufacturing Technology/Industrial Preparedness (“ManTech”)
(various)*

365. Boeing received no funding under the Navy ManTech project element (0708011N) in the 2007-2012 period.

366. Boeing received only one contract funded entirely through Air Force ManTech during the 2007-2012 period, Contract FA8650-11-C-5500, to study and assess [[HSBI]]⁶¹⁶. The military utility of this technology is obvious. The contract does not mention any potential civil use.

367. Air Force ManTech also provided [BCI] in funding for Contract FA8650-08-D-3857, D.O. 32, which received most of its funding through PE 0603211F.

368. OSD ManTech (0603680D8Z) funded two contracts. Contract FA8650-09-C-5508 called for [BCI] of conformal load-bearing antenna structures (“CLAS”).⁶¹⁷ [BCI].⁶¹⁸ CLAS are antenna elements built into the load-bearing elements of an aircraft, so that a blade, wire, or dish antenna is unnecessary.) Contract FA8650-11-C-5520 called for Boeing to study [[HSBI]].⁶¹⁹ The CLAS project has an obvious military objective, and standard-setting is traditionally an interest of governments. Neither contract references potential civil uses, nor would there be any realistic expectation of conformal antennas having civil applications.

369. The EU lists a number of ManTech projects that reference Boeing as a “participant”.⁶²⁰ However, it was not a contractor or cooperative agreement party for any of those programs.

b. The patents identified by the EU only serve to underscore the rarity with which DoD-funded RDT&E produces patentable inventions with applicability in the large civil aircraft sector.

370. The EU seeks to bolster its assertions regarding dual-use technology resulting from DoD research by citing to certain patents issued to Boeing subject to a government license for inventions that the EU considers useful to Boeing civil aircraft. These examples only underscore the rarity of DoD technology actually yielding a civil use.

371. The EU highlights 31 patents for inventions that are reported as having been invented by Boeing employees in the course of work under a government-funded contract (numbers with lines through them indicate program elements not subject to the EU’s claims in this proceeding):

⁶¹⁶ Contract FA8650-11-C-5500, Attachment 1, p. VI-1 (Exhibit USA-150(HSBI)).

⁶¹⁷ Contract FA8650-09-5508, Attachment 4, p. 1 (Exhibit USA-151(HSBI)).

⁶¹⁸ MRL Matrix Version 7.1 (May 1, 2009) (Exhibit USA-152).

⁶¹⁹ Contract FA8650-12-C-5520, SOW, pp. 1-2 (Exhibit USA-153(HSBI)).

⁶²⁰ EU FWS, para. 276.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 119

<u>Contract or agreement</u>	<u>Patent</u>	<u>PE number(s)</u>
<u>Funded through dual-use program elements</u>		
F33615-97-2-3400	7,252,577	0602201F; 0603211F; 0603205F; JF090507 ; 0708011F; 0804741F
F33615-98-3-5103	6,848,321 7,231,826 7,393,488 7,505,885 7,531,048 8,084,114	0602102F; 0708011F; 0603211F
F33615-98-3-5104	7,189,345 7,708,249	0602102F; 0708011F; 0603211F 0602011F
N00014-00-C-0544	7,841,152	0708011N; 0603563N ; 0603573N ; 0603512N
N000421-00-3-0123	6,622,972	0602234N ; 0602805N
<u>Funded through “military aircraft” program elements</u>		
F33657-91-C-0006	6,024,555 5,714,179 6,698,484	0604239F
F33615-93-C-5322	5,506,499	unknown
N00019-93-C-0006	5,698,316	0604262N; 0206121M ; 0804745N ; 0909999N
F33657-01-D-2000	7,713,347	0401130F
N00019-04-G-0007	7,347,083	0604262N
N0019-04-C-0005	7,667,830 8,194,239 8,352,486	0604270N ; 0604269N ; 0604136N; 0204154N
N00383-06-D-001J	7,933,725	0204136N
<u>Funded through “general research” program elements</u>		
F33615-00-D-3052	8,042,767 8,366,050	0602201F
<u>Outside the scope of the EU claims</u>		
F29601-95-C-0228	6,007,894	(Contract not with Boeing)
F33657-96-C-2059	7,442,230	Not research funding
F19628-01-0016, D.O. 22, 25-30	8,016,650	0602417F ^{*(1)}
F49620-02-C-0035	7,751,460	0602712E
MDA972-03-9-0004	7,861,411	(contract not with Boeing)
FA8650-04-C-3416	7,773,885	0605502F
HR0011-05-C-0068	8,115,646	0602715E*
FA8202-07-D-0004	8,376,337	0207131F

* The United States considers these program elements to be outside the scope of this proceeding.

(1) The EU considers that the DRAGON project was the only aspect of this program element to be dual use.

These delivery orders were not part of the DRAGON project. CRA-Rumpf Report, pp. 12-13 (Exhibit EU-23).

372. The first significant point shown by the EU’s discussion of patents is how rare it is for DoD contracts to result in patentable inventions. In the period of 2007 through the present, Boeing received funding under [BCI] DoD contracts, task orders, and agreements. For that same period, the EU identified 24 patents for inventions with civil uses invented while working on DoD contracts. Thus, fewer than 1 in 100 DoD contracts results in a patentable invention that the EU considers worth highlighting.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 120

373. This comparison actually overstates the likelihood that typical DoD RDT&E activities will produce a patentable civil use invention. Of the 31 inventions highlighted by the EU, only 11 of them resulted from research funded through dual-use programs, ManTech, or both. These programs represented a vanishingly small proportion of DoD RDT&E spending during the period. Their disproportionate yield of inventions that the EU considers as having civil use indicates, rather unsurprisingly, that research is more likely to produce civil technology when it sets the production of civil technology as one of its objectives.

374. Conversely, the “general research” program elements, with the spending of vastly more money, produced only two patents that even the EU considers as having civil uses, making such instances an extremely rare occurrence.

375. The so-called “military aircraft” program elements yielded a few patents that the EU considers as having civil uses. However, these tend also to be among DoD’s larger budget categories. Thus, although program element 0401130F, covering RDT&E related to the C-17, resulted in one patent that the EU identifies as having a civil use, it expended \$3.2 billion during the 1992-2007 period.⁶²¹ Again, the data indicate that even in the program elements on which the EU focuses, technologies that it considers as having civil uses rarely arise.

376. It is also significant that of these 31 patents, Boeing’s ownership rights in eight (almost one-quarter) did not result from the payments and access to facilities challenged by the EU.⁶²² In four instances, the work was not funded by program elements challenged by the EU. In one instance, the work was funded by projects within the program that the EU concedes do not conduct dual-use research. In two instances, the research was conducted under a contract between DoD and a non-Boeing company that Boeing later bought at arm’s length and for fair market value. Thus, to the extent that there was any subsidy or dual-use element to the original transactions, Boeing would have factored that value into its purchase price. And, finally, one contract did not involve research activity. All of these examples only serve to emphasize the multitude of ways Boeing has of acquiring intellectual property outside of the program elements challenged by the EU.

377. Another metric is also telling. The EU cites a computer search indicating that from January 1, 2007, through March 15, 2013, the U.S. Patent and Trademark Office issued 169 patents to Boeing for inventions invented while working under DoD contracts.⁶²³ During that same period, Boeing was granted 3,736 U.S. patents. Thus, patents arising as a result of work under DoD contracts are not a significant part of Boeing’s intellectual property portfolio.

⁶²¹ CRA-Rumpf Report, Annex D (Exhibit EU-23); 2006 CRA Report, Annex J (Exhibit EU-29).

⁶²² For purposes of this comparison, the United States assumes that program element 0602715E is outside the Panel’s terms of reference.

⁶²³ EU FWS, para. 320. The EU incorrectly refers to DoD as having “transferred” these patents to Boeing. DoD transferred nothing. Under U.S. law, ownership of those patents vested in the Boeing employees who invented them, and then to Boeing by reason of their employment agreements. The only “transferring” was the license Boeing gave DoD to use the license for government purposes.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 121

378. The United States focuses here on patents because that is what the EU has done. However, the situation with patents is emblematic of the situation with other forms of technology. While it is easy when looking at a summary of DoD research to hypothesize some way in which the effort could produce something useful to the civil sector, in reality, it rarely occurs. And, of course, even when it does occur, that does not show that the underlying instrument conferred a subsidy.

c. *The EU has failed to demonstrate that DoD contracts funded by the “general research” program elements are joint ventures.*

i. *General observations regarding the EU’s argument*

379. The Appellate Body has found 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.”⁶²⁴ The panel must “thoroughly scrutinize the measure before it” and “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 {measure}.”⁶²⁵ The EU never provides such an analysis. Therefore, it has failed to meet its burden of proof.

380. The EU’s entire legal analysis of the financial contribution consists of five short paragraphs containing a few short quotations from the Appellate Body’s finding regarding DoD agreements in *US – Large Civil Aircraft*, only one citation to evidence, and the conclusory statement that DoD’s “payments and other support . . . have these same characteristics.”⁶²⁶ Needless to say, this simplistic approach fails completely to “thoroughly scrutinize the measure” or “identify *all* relevant characteristics.” The EU closes its analysis by asserting that the alleged “transfer of patent and other intellectual property rights” to Boeing is yet *another* financial contribution because patents, trade secrets, and data rights are supposedly “goods.”⁶²⁷ This last point is particularly egregious because the EU already brought this argument to the Appellate Body and *lost*. Specifically, the Appellate Body assessed the treatment of patent rights under NASA and DoD contracts “on the assumption that the allocation of patent rights is in some respects a self-standing subsidy.”⁶²⁸ It upheld the original panel’s finding that, if that were the case, the subsidy was not specific.⁶²⁹ The EU did not even appeal the original panel’s finding

⁶²⁴ *US – Softwood Lumber CVDs (AB)*, para. 52.

⁶²⁵ *US – Large Civil Aircraft (AB)*, para. 586, quoting *China – Auto Parts (AB)*, para.171 (emphasis in original).

⁶²⁶ EU FWS, paras. 365-369.

⁶²⁷ EU FWS, para. 370.

⁶²⁸ *US – Large Civil Aircraft (AB)*, para. 729.

⁶²⁹ *US – Large Civil Aircraft (AB)*, para. 789 (“proceeding on the Panel’s assumption that the allocation of patent rights is in some respects a self-standing subsidy . . . we do not see a basis to find that such a subsidy is explicitly limited to certain enterprises, and therefore specific within the meaning of Article 2.1(a) of the SCM Agreement.”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 122

that treatment of data rights and trade secrets was not a separate subsidy.⁶³⁰ Thus, in raising this issue again, the EU is making a collateral attack on the adopted findings of the original panel and the Appellate Body. In short, with this mass of errors, the EU fails completely to meet its burden of proof with regard to DoD contracts funded through the “general research” program elements.

381. A thorough analysis of all the relevant characteristics of these instruments would require examining all of the characteristics the Appellate Body identified as relevant to its analysis of the NASA contracts and DoD agreements and how, if at all, the two sets of measures differ. In this regard, it is significant that the Appellate Body’s evaluation of NASA contracts and DoD agreements went far beyond the four-sentence “summary” quoted by the EU. As noted above in section III.C.1, the Appellate Body considered all of the following factors:

- “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”⁶³¹
- “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to Boeing under the ACT programme provided for research teams that included NASA employees.”⁶³²
- “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”⁶³³
- “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”⁶³⁴
- “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”⁶³⁵
- LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”⁶³⁶

⁶³⁰ *US – Large Civil Aircraft (AB)*, para. 727.

⁶³¹ *US – Large Civil Aircraft (AB)*, para. 595.

⁶³² *US – Large Civil Aircraft (AB)*, para. 594.

⁶³³ *US – Large Civil Aircraft (AB)*, para. 595.

⁶³⁴ *US – Large Civil Aircraft (AB)*, para. 595.

⁶³⁵ *US – Large Civil Aircraft (AB)*, para. 596.

⁶³⁶ *US – Large Civil Aircraft (AB)*, para. 596

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 123

The United States will address each of these factors, as well as any other relevant factors.

382. The preceding section addressed cooperative agreements, TIAs, and OTAs. These represent cooperative efforts where DoD and a contractor have recognized a joint objective, and are working together to achieve that objective. In contrast, under a procurement contract, “the principal purpose . . . is to acquire property or services for the direct benefit or use of the Federal Government.”⁶³⁷

ii. DoD contracts funded through the “general research” program elements are not “akin to a species of joint venture.”

383. To begin, the United States does not dispute the Appellate Body’s finding that the DoD agreements were akin to equity contributions to joint ventures, and as such a financial contribution under Article 1.1(a)(1)(i). Nor do we dispute that the EU may rely upon that finding in this proceeding with regard to agreements covered by the panel and Appellate Body finding. However, the EU errs in trying to extend that finding to procurement contracts on the grounds that they “have these same characteristics” as DoD agreements. The relevant characteristics are not the “same,” and the EU should not have overlooked these differences because the original panel highlighted them in finding that DoD procurement contracts were purchases of services, while DoD agreements were not.⁶³⁸ It is also worthwhile to consider differences between DoD contracts funded through the “general research” project elements and the pre-2007 NASA contracts that the Appellate Body found to be “akin to a species of joint venture.”⁶³⁹

384. The EU’s argument, supported by a single footnote to a single piece of evidence (which the EU misperceives) does not “thoroughly scrutinize the measure” or “identify *all* relevant characteristics of the measure.” It accordingly fails to meet the EU’s burden of proof. A thorough analysis of the evidence, which the United States provides below, establishes that DoD contracts funded through the “general research” program elements are purchases of services.

385. The EU asserts that procurement contracts “involve the commitment of monetary and non-monetary resources from both DoD and Boeing.”⁶⁴⁰ It provides *no* evidence to support its contentions regarding non-monetary resources from DoD *or* monetary resources from Boeing. It has accordingly failed to meet its burden of proof on this score.

386. The EU also asserts that “{t}he precise nature of the R&D is determined collaboratively by DOD and Boeing,”⁶⁴¹ but the only evidence it provides to note that the statement of work for

⁶³⁷ *US – Large Civil Aircraft (Panel)*, para. 7.1142 (emphasis removed), *quoting*, 32 CFR 21.670 (Exhibit USA-0249).

⁶³⁸ *US – Large Civil Aircraft (Panel)*, para. 7.1148-7.1157, 7.1162-7.1171.

⁶³⁹ *US – Large Civil Aircraft (AB)*, para. 624.

⁶⁴⁰ EU FWS, para. 367.

⁶⁴¹ EU FWS, para. 367.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 124

one Air Force contract is on Boeing letterhead. The EU betrays a lack of understanding of the contracting process. As noted above, in S&T contracting DoD does not generally issue a common statement of work in its solicitations. It identifies a research objective, and asks proposers to propose the best way they can devise to achieve that objective. This process generates a technical competition of ideas, along with an evaluation of cost proposals, so as to allow DoD to choose the solution that best meets DoD's needs. DoD is precluded by law and regulation from collaborating with contractors during the drafting of proposals, as that would create a conflict of interest in the evaluation process. Between submission of bid and award, DoD may ask for clarification of a proposal, but it is again precluded in drafting amendments to the proposals. After acceptance of a bid, there may be a further negotiation of the statement of work, but DoD may also accept the initial proposal, in which case it may use the version as originally submitted by the proposer. Thus, the situation cited by the EU actually shows that there was no collaboration – DoD took the initial proposal “as is.”

387. Thus, the EU has failed to meet its burden of proof. It has neither adduced credible evidence nor advanced valid arguments that DoD procurement contracts funded by the original “general research” program elements “have the same characteristics” as DoD agreements. As a matter of U.S. law, a procurement contract is the proper instrument when the principal purpose is the acquisition of supplies or services for the direct benefit or use of the federal government. An agreement is only appropriate when the purpose of the transaction is assistance, and there is no fee or profit to pay to the other party.⁶⁴² Moreover, the evidence cited above shows that, as a matter of fact, the exclusive purpose of the DoD contracts funded through the original “general research” program elements is the acquisition of knowledge for military purposes, and not to conduct dual-use research.

388. Consideration of the Appellate Body findings regarding pre-2007 NASA contracts confirms that these DoD contracts are not “akin to a species of joint venture.”

(a) **Setting research topics**

Finding on pre-2007 contracts: “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”⁶⁴³

For DoD S&T contracts: As described earlier in this section and in section III.E.2, DoD chooses the subjects to be researched entirely through an internal process of evaluating user needs and technology opportunities or resources. Proposers, who may be contractors, universities, or other entities, then propose solutions based on their knowledge inventory and their understanding of what else they need to do to reach the technology goal.

⁶⁴² *US – Large Civil Aircraft (Panel)*, paras. 7.1152-7.1153.

⁶⁴³ *US – Large Civil Aircraft (AB)*, para. 595.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 125

(b) Access to facilities, equipment, and employees

Finding on pre-2007 contracts: “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to Boeing under the ACT programme provided for research teams that included NASA employees.”⁶⁴⁴

For DoD S&T contracts: DoD contracts with outside suppliers when its internal resources are insufficient to meet an identified capability need. The EU did not challenge DoD equipment or employees as a subsidy in the original proceeding, and has cited no evidence of DoD providing facilities, equipment, or employees to Boeing under the “general research” program elements. As a matter of evidence, the relevant contracts, access to facilities, equipment, and employees is not significant.

(c) Value of access to facilities, equipment, and employees

Finding on pre-2007 contracts: “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”⁶⁴⁵

For DoD S&T contracts: The EU has not pointed to a single contract for which this is the case, and the United States is aware of none.

(d) Pooling of resources

Finding on pre-2007 contracts: “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”⁶⁴⁶

For DoD S&T contracts: Most of the contracts do not provide facilities or equipment, and do not reference the “pooling” of employees.

(e) Royalties related to intellectual property

Finding on pre-2007 contracts: “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”⁶⁴⁷

⁶⁴⁴ *US – Large Civil Aircraft (AB)*, para. 594.

⁶⁴⁵ *US – Large Civil Aircraft (AB)*, para. 595.

⁶⁴⁶ *US – Large Civil Aircraft (AB)*, para. 595.

⁶⁴⁷ *US – Large Civil Aircraft (AB)*, para. 596.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 126

For DoD S&T contracts: This is true for situations in which a Boeing employee working on the contract, or a DoD and Boeing employee working together on the contract, invent an invention. It is not true when a DoD employee working alone invents an invention. In that case, DoD would own any invention, and Boeing would have to pay a royalty to sue the invention.

(f) **Data rights**

Finding on pre-2007 contracts: LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”⁶⁴⁸

For DoD S&T contracts: This has never been true of DoD contracts. DoD has *always* retained (and still retains) the right to exploit for itself the results of its research contracts.

Thus, almost all of the facts that led to the Appellate Body’s conclusion that pre-2007 NASA contracts were “akin to a species of joint venture” are not accurate with respect to DoD contracts funded through the original “general research” program elements. The EU has accordingly failed to meet its burden of proof to establish that the post-2006 contracts were financial contributions.

*iii. DoD contracts funded through the original “general research”
program elements are purchases of services.*

389. The considerations listed above, along with other evidence before the Panel, support a conclusion different from the one reached by the EU – that the transactions are purchases of services. On the DoD side of the transaction, by far the primary contribution consists of the payments. Provision of equipment is minimal or nonexistent, and provision of DoD equipment and employees is not properly within the Panel’s terms of reference.⁶⁴⁹ Even if equipment and employees were relevant, DoD makes them available even more rarely than does NASA. DoD personnel are part of the process to evaluate the results of contractor research, and not to help them do their work except as reviewers of results produced by the contractor. On the Boeing side of the transaction, the primary contribution consists of services, as witnessed by the descriptions of the work in the contracts:

- **[[HSBI]]**⁶⁵⁰

⁶⁴⁸ *US – Large Civil Aircraft (AB)*, para. 596

⁶⁴⁹ Section III.B.3 discusses this issue in greater detail.

⁶⁵⁰ Contract F33615-00-D-3052, D.O. 83 (Exhibit USA-121(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 127

- “*engineering design and analyses of integrated inlet/engine/power and thermal management / exhaust systems for the material concept of the Next Generation Air Dominance system.*”⁶⁵¹
- **[[HSBI]]**⁶⁵²
- “*conduct studies to evaluate the affects of Fischer-Tropsch jet fuels on military aircraft*”⁶⁵³

“*demonstrate the ability of metamaterials to improve antenna design for realistic military application scenarios.*”⁶⁵⁴

All of these are services. Even where the contract involves production of a good, it is a test article to be used for the purpose of some sort of research.⁶⁵⁵

390. In *Canada – Renewable Energy*, the Appellate Body noted that the panel in that dispute found, without dispute from the parties, that purchases of goods within the meaning of Article 1.1(a)(1)(iii) “occur ‘when a “government” or “public body” obtains possession (including in the form of an entitlement) over a good by making a payment of some kind (monetary or otherwise).’”⁶⁵⁶ Under that logic, when a government obtains entitlement to the supply of a service by making a payment of some kind, there would be a purchase of a service. As the extensive evidence cited above indicates, that is exactly what happens under a NASA research contract – the agency pays money, and obtains entitlement to the performance of services. Therefore, these contracts are purchases of services.

d. DoD contracts funded through the “general research” program elements do not confer a benefit.

391. Because the EU has identified the financial contribution incorrectly, it uses joint ventures as benchmarks. In section III.E.3.c, the United States demonstrated that the transactions at issue were purchases of services and, therefore, were not a financial contribution at all. However, even if the Panel does not accept this conclusion, the fact that the United States was buying something in these transactions must play a role in the analysis.

⁶⁵¹ Contract FA8650-07-D-2799, D.O. 5 (Exhibit USA-128(HSBI)).

⁶⁵² Contract FA8650-08-D-3857, D.O. 28 (Exhibit USA-132(HSBI)).

⁶⁵³ Contract F33615-03-D-2358, D.O. 6 (Exhibit USA13-140(HSBI)).

⁶⁵⁴ Contract FA8650-09-C-1658 (Exhibit USA-142(HSBI), frame 36/49).

⁶⁵⁵ *E.g.*, Contract NNL07AA54C, SOW, pp. 1-2 (Exhibit USA-106(HSBI)) (“Phase I shall involve the development a non-proprietary 3D aircraft concept definition. . . . In Phase II, the wind tunnel model evolved in Phase I shall be designed and built. . . . In the second year of Phase 2, the model shall be tested in the wind tunnel. . .”).

⁶⁵⁶ *Canada – Renewable Energy (AB)*, para. 5.123.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 128

392. The EU has not supported its assertion that no private entity contracting research services would buy only own-use rights in patents that result from the research, but even if it had, that would be irrelevant. The proper question under the adequate remuneration standard focuses on what the government paid for what it obtained. A benefit would exist only if the government paid too much for the rights it obtained. The EU has failed entirely to address that standard.

393. In this regard, the Appellate Body has found that, in situations where a transaction presents valuation difficulties, “such benchmark may also be found in price-discovery mechanisms such as competitive bidding or negotiated prices, which ensure that the price paid by the government is the lowest possible price offered by a willing supply contractor.”⁶⁵⁷ As the contracts themselves show, most of the DoD contracts challenged by the EU are subject to competitive bidding.⁶⁵⁸ Although there are some contracts that were not subject to full and open competition, these situations arose primarily because Boeing was doing follow-on work from a contract that was subject to full and open competition, or had been down-selected after a full and open competition. As this dispute shows, the former situation is completely consistent with commercial practice, as airlines frequently use sole-source purchases for follow-on sales of aircraft, parts, or upgrades. The latter situation simply reflects a process of winnowing competitors in stages, rather than all at once in an initial tender. Thus, the Panel can have a high degree of confidence that DoD did not pay more than adequate remuneration for its procurement contracts. Indeed, in this dispute the Appellate Body recognized that competitive bidding can influence the structure of NASA and DoD contracts. In particular, it noted that “Boeing’s monetary contribution is consideration for the enhanced data rights that it obtains under the assistance instruments, which grant more limited rights to the government over the data.”⁶⁵⁹ The variation in price to compensate for relatively stronger data rights protections for Boeing confirms that the NASA/DoD contracts reflect a negotiated bargain.

e. The patent rights subsidy alleged by the EU is not specific because it is available under any government contract.

394. Under Article 2.1(a) the SCM Agreement, a subsidy is specific if the granting authority or the legislation under which the granting authority operates explicitly limits access to the subsidy to certain enterprises. Article 2.1(c) provides that specificity will also exist if other factors indicate that it is in fact specific. With regard to procurement contracts, the EU alleges a financial contribution in the form of payments or provisions of goods and services. The only benefit alleged by the EU is that, under these instruments, Boeing receives more favorable rights

⁶⁵⁷ *Canada – Renewable Energy (AB)*, para. 5.228.

⁶⁵⁸ Any contract that is not subject to competitive bidding must contain an entry in box 13 of the standard NASA contract form indicating the reason that the contract is not subject to “full and open competition.” The absence of such an indication means that the contract was open to competitive bidding. *E.g.*, Contract NNA06BC41C, p. 1 (Exhibit USA-49(HSBI)).

⁶⁵⁹ *US – Large Civil Aircraft (AB)*, para. 664.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 129

in patents than would be the case if a commercial actor had funded the research.⁶⁶⁰ The Appellate Body found that the attribution of patent rights, if taken as a free-standing subsidy, is not specific because it is available under any government contract, by any agency, in any sector.⁶⁶¹ The fact that this treatment is memorialized in an instrument – a DoD contract – does not change the fact of its widespread availability across all sectors of the U.S. economy. Therefore, the subsidy, as alleged by the EU, is not specific.

395. The EU asserts that specificity exists under Article 2.1(a) of the SCM Agreement because R&D performed is limited to defense topics⁶⁶² However, this contention does not address the standard established by the SCM Agreement – whether access to the *subsidy* is limited. The EU has never established, or even claimed, that DoD research programs, taken as a whole, are a subsidy to Boeing. Its subsidy allegation instead addresses alleged financial contributions effectuated through agreements and other instruments. The only benefit alleged is that, in those transactions, Boeing receives rights in patents more favorable than under a commercial transaction. Thus, the specificity analysis must be based on that subsidy. As the Appellate Body has already found that, assuming *arguendo* that this situation is a subsidy, it is not specific. Therefore, the EU’s specificity claim under Article 2.1(a) of the SCM Agreement fails.

396. The EU also argues that the alleged benefit is specific under Article 2.1(c). But again, it addresses only DoD research programs, and ignores the inquiry mandated by the SCM Agreement into the subsidy, namely the allocation of patent rights common to all U.S. government contracts. The EU has presented no evidence as to access to that treatment as available through U.S. government contracting. Therefore, its specificity claim under Article 2.1(c) also fails.

397. As neither of the grounds the EU asserts for specificity is valid, the EU has failed to establish that the subsidy it alleges – favorable intellectual property rights under U.S. government contracts – is specific.

4. *The EU has not demonstrated that contracts funded through the “military aircraft” program elements are subsidies or are specific.*

398. As section III.E.2 explains, once DoD have moved to acquisition of a weapons system, which is the case with all of the “military aircraft” program elements identified by the EU, it

⁶⁶⁰ EU FWS, paras. 377-379. Although the EU describes the benefit as relating generally to “intellectual property,” the only comparison it makes is between government patent rights clauses and those under commercial transactions. Under U.S. government contracts, the division of data rights is, in fact, different, with the general rule being that the government obtains unlimited rights to use data resulting from work under the contract for any purpose, government or otherwise. *US – Large Civil Aircraft (Panel)*, para. 7.1300. The EU has provided no evidence from a legitimate benchmark as to the division of data rights in commercial transactions, or compared it to each transaction.

⁶⁶¹ *US – Large Civil Aircraft (AB)*, para. 799.

⁶⁶² EU FWS, para. 386.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 130

creates a “program of record” with its own “program office” responsible for overseeing any related contracts.

- a. DoD program of record contracts are designed to purchase or improve weapon systems for DoD, and are driven by military needs and objectives.*

399. One characteristic unites the EU allegations regarding these programs – absence of evidence. For most of them, the EU presents no evidence regarding the period after 2006, which the EU asserts is the most relevant for the Panel’s analysis.⁶⁶³ For all of them, the evidence prior to that time consists exclusively of cross-references to the 2006 CRA Report, which relies almost entirely on the subjective impressions of CRA staff at that time.⁶⁶⁴ In short, it is an entirely *ex post* and speculative approach to the facts – exactly the opposite of the *ex ante*, fact-based examination that the Appellate Body found is necessary under the SCM Agreement.⁶⁶⁵ There is nothing identifying the relevant transactions, explaining their terms, or putting them in the context of the time at which the parties entered into the agreement. There is certainly no evidence of “the nature of the transaction through which something of economic value is transferred by a government”⁶⁶⁶ sufficient to allow the panel to “thoroughly scrutinize the measure before it.”⁶⁶⁷ As this is the only information that the EU puts forward in support of its equally sparse legal analysis, it has failed to make a *prima facie* case of the existence of a subsidy.

400. This is the case for each of the “military aircraft” program elements challenged by the EU in the original proceeding. The EU has also made a number of errors and omitted critical facts with regard to the individual programs, which we discuss below.

- i. V-22/CV-22 “Osprey” (PE 0604262N/0401318F)*

401. DoD expenditures under this program element began “with the purpose of defining the replacement vehicle for the CH-46 helicopter in the Marine Corps,” with separate projects to fund design, develop, and test the aircraft, and explore different designs to meet operational requirements.⁶⁶⁸ By 1997, the process had moved to the point where DoD justified the expenditures as necessary for “engineering and manufacturing development of new end-items

⁶⁶³ EU FWS, para. 49.

⁶⁶⁴ Where the CRA report cites evidence, the EU has failed to include that information as exhibits to its submission, contrary to the Panel’s working procedures. *E.g.*, 2006 CRA Report, pp. 21-23, notes 42-52 (Exhibit EU-29).

⁶⁶⁵ *EC – Large Civil Aircraft (AB)*, para. 706 (“the determination of benefit under Article 1.1(b) of the SCM Agreement is an *ex ante* analysis that does not depend on how the particular financial contribution actually performed after it was granted.”).

⁶⁶⁶ *US – Softwood Lumber CVDs (AB)*, para. 52.

⁶⁶⁷ *US – Large Civil Aircraft (AB)*, para. 586, quoting *China – Auto Parts (AB)*, para. 171 (emphasis in original).

⁶⁶⁸ 1994 V-22 Budget, p. 4 (Exhibit EU-69, frame 4/123).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 131

prior to production approval decision.”⁶⁶⁹ The hardware was still in development in 2002, when the Navy explained that “{t}he V-22 program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy, and the special operations needs of the Air Force and United States Special Operations Command.”⁶⁷⁰ In 2007, the Navy explained that the expenditures under this program element were needed “for correction of deficiencies and . . . encompasses engineering and manufacturing development of new end-items.” It also referenced upgrades to take place after the production decision.⁶⁷¹ The CV-22 is the Air Force variant of this aircraft, and has followed a similar development history. The military objective of this spending is clear, and the EU has pointed to nothing in these materials suggesting that potential civil uses for this technology were relevant.

402. The EU discusses no evidence regarding these aircraft subsequent to 2006, and there is no value ascribed to them in the EU’s valuation of the financial contribution.⁶⁷² As the EU has set a subsidy value of zero for these programs, there is no financial contribution, and the EU has apparently included this information solely for background purposes.

ii. F/A-18 Squadrons (PE 0204136N)

403. The Navy justified this budget item in 1993 on the grounds that:

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. . . . The follow-on F/A-18 (E/F version) is an airframe upgrade incorporating increased capabilities, performance, and survivability necessary to satisfy the continuing requirement to implement new and more effective capability to counter emerging threats.⁶⁷³

404. The situation remained basically the same in 1996.⁶⁷⁴ By 2001, the F/A-18 E/F had entered service, and the objective with regard to the F/A-18 C/D version remained the same. The Navy noted that it maintained funding for the program element because of the need for upgrades.⁶⁷⁵ In 2006, the Navy cited the need for upgrades and other improvements as the basis for spending under this program element.⁶⁷⁶ The military objective of this spending is clear, and

⁶⁶⁹ 1997 V-22 Budget, p. 87-1 (Exhibit EU-69, frame 25/123).

⁶⁷⁰ 2002 V-22 Budget, item no. 107, p. 1 (Exhibit EU-69, frame 69/123).

⁶⁷¹ 2007 V-22 Budget, item no. 95, p. 1 (Exhibit EU-69, frame 116/123).

⁶⁷² CRA-Rumpf Report, Annex D (Exhibit EU-23).

⁶⁷³ F/A-18 Squadrons 1993 Budget, p. 49 (Exhibit EU-70, frame 4/439).

⁶⁷⁴ F/A-18 Squadrons Budget, p. 152-1 of 253-27 (Exhibit EU-70, frame 82/439).

⁶⁷⁵ F/A-18 Squadrons 2002 Budget, item 176, p. 2 (Exhibit EU-70, frame 227/439).

⁶⁷⁶ F/A-18 Squadrons 2007 Budget, item 170, p. 1, frame 406/439 (Exhibit EU-70).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 132

the EU has pointed to nothing in these materials suggesting that potential civil uses for this technology were relevant.

405. The EU provides no evidence regarding this aircraft subsequent to 2006, and there is no value ascribed to it in the EU’s valuation of the financial contribution.⁶⁷⁷ As the EU has set a subsidy value of zero for this program, there is no financial contribution, and the EU has apparently included this information solely for background purposes.

iii. Joint Strike Fighter

406. The EU provides absolutely no evidence regarding the program elements it considers relevant to this aircraft – no copies of budgets and none of the citations supporting the assertions in the 2006 CRA Report. The only information it provides are citations to newspaper articles and statements positing that Boeing was able to apply some of the knowledge learned in its unsuccessful bid for the JSF to its civil projects.⁶⁷⁸ It is difficult to see how any of this is relevant to the questions of the existence of a financial contribution.

407. There is also no value ascribed to these program elements in the EU’s valuation of the financial contribution.⁶⁷⁹ As the EU has set a subsidy value of zero for each of these programs, there is no financial contribution, and the EU has apparently included this information solely for background purposes.

iv. C-17 (PE 0401130F/0604231F)

408. The U.S. Air Force undertook the C-17 program because “{a}dditional airlift capability is needed for rapid strategic deployment of combat forces to support national objectives and for timely theater movement to meet forward area mobility requirements. . . . Specific tasks associated with the airlift mission area include deployment, employment (airland, airdrop, and extraction), sustaining support, retrograde, and combat redeployment.”⁶⁸⁰ For the 1997 budget, the mission remained the same, and the Air Force added that the program was ready to move into full-rate production.⁶⁸¹ The 2002 budget noted that spending under this program element was “continuing producibility and performance improvements to support full-rate production and increase the operational capability of the C-17 through programmed modifications.”⁶⁸² The 2007 budget noted similar objectives, and explained that the Air Force had developed an acquisition strategy of using six separate contracts to “support the entire scope of the C-17 weapon system, including one RDT&E contract “to develop cost reduction changes, capability enhancements,

⁶⁷⁷ CRA-Rumpf Report, Annex D (Exhibit EU-23).

⁶⁷⁸ EU FWS, para. 285.

⁶⁷⁹ CRA-Rumpf Report, Annex D (Exhibit EU-23).

⁶⁸⁰ C-17 1993 Budget, p. 578 (Exhibit EU-72, frame 5/180).

⁶⁸¹ C-17 1997 Budget, p. 1658 (Exhibit EU-72, frame 31/180).

⁶⁸² C-17 2002 Budget, p. 1713 (Exhibit EU-72, frame 72/180).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 133

and design fixes to service-revealed problems.⁶⁸³ The overall mission remained the same in 2012, but the Air Force directed RDT&E efforts to “support aircraft performance improvements and airspace access mandates. In addition, funding may be used to develop solutions to emergency obsolescence and safety of flight issues that impact the mission capability or continued support of the C-17 weapon system.”⁶⁸⁴ The military objective of this spending is clear, and the EU has pointed to nothing in these materials suggesting that potential civil uses for this technology were relevant.

409. The EU limits its claims to avionics, and the CRA-Rumpf report identifies four instruments as relevant:⁶⁸⁵

- F33657-01-D-2000, D.O. 27 (Replacement of the Core Integrated Processor);
- FA8614-08-D-2080, D.O. 4 (Instrument Landing System Identification and Flight Control Computer);
- FA8614-08-D-2080, D.O. 21 (Replacement of Heads-Up Display); and
- FA8614-08-D-2080, D.O. 22 (Communication and Navigation Capability).

These delivery orders call only for the study of these technologies to improve the performance of the C-17, and make no reference to potential civil uses. The statements of work for the third and fourth contain large amounts of text subject to export control, suggesting strongly that the technologies involved could not be incorporated in a civil aircraft, which must be able to fly freely among countries.⁶⁸⁶

v. Other military aircraft RDT&E PEs

410. For these program elements, the EU does not provide even the minimal level information it does for V-22, CV-22, F/A-18 Squadrons, JSF, and C-17 programs.⁶⁸⁷ The Panel should accordingly reject all EU claims regarding the F-22, B-2, Comanche, A-6, and AV-8B. In addition, the EU has ascribed them no value in its valuation of the financial contribution.⁶⁸⁸ As

⁶⁸³ C-17 2007 Budget, p. 1985 (Exhibit EU-72, frame 123/180).

⁶⁸⁴ C-17 2012 Budget, line item 217, p. 1 (Exhibit EU-72, frame 162/180).

⁶⁸⁵ CRA-Rumpf Report, p. 13 (Exhibit EU-23). The report also refers to “Information Awareness (IA) Strategy,” but this phrase does not appear in the C-17 budget documents and is not used in statements of work for the contracts financed through the program elements referenced by the EU.

⁶⁸⁶ *E.g.* Contract FA8614-08-D-2080, D.O. 21, statement of requirements, pp. 1-6, 8-10, 12-13, 17-18, and 19-38 (Exhibit USA-0155(HSBI)); Contract FA8614-08-D-2080, D.O.22, statement of requirements, pp. 5-10, and 12 (Exhibit USA-0156(HSBI)).

⁶⁸⁷ EU FWS, paras. 239-290.

⁶⁸⁸ CRA-Rumpf Report, Annex D (Exhibit EU-23).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 134

the EU has set a subsidy value of zero for these programs, there is no financial contribution, and the EU has apparently included this information, such as it is, for background purposes.

b. The EU’s assertions regarding patents are also incorrect insofar as they relate to contracts under the “military assistance” program elements.

411. The EU makes a number of assertions in its first written submission regarding patents for inventions allegedly invented by Boeing employees working under government contracts. Section III.E.3.b discusses those assertions with regard to contracts under both the “general research” and “military aircraft” program elements.

c. The EU has failed to demonstrate that DoD program of record contracts are joint ventures, when they are actually purchases of goods or product upgrades not covered by the EU claims.

i. General observations regarding the EU’s argument

412. Section II.E.3.c.i sets out the general legal flaws with the EU’s arguments. The United States incorporates those arguments by reference.

ii. DoD contracts funded through the “military aircraft” program elements are not “akin to a species of joint venture.”

413. To begin, the United States does not dispute the Appellate Body’s finding that the DoD agreements were akin to equity contributions to joint ventures, and as such a financial contribution under Article 1.1(a)(1)(i). Nor do we dispute that the EU may rely upon that finding in this proceeding with regard to agreements covered by the panel and Appellate Body finding. However, the EU errs in trying to extend that finding to contracts for the procurement of weapon systems on the grounds that they “have these same characteristics” as DoD agreements. The relevant characteristics are not the “same,” and the EU should not have overlooked these differences, because the original panel highlighted them in finding that DoD procurement contracts were purchases of services, while DoD agreements were not.⁶⁸⁹ The differences between DoD contracts funded through the “military aircraft” project elements and pre-2007 NASA contracts further confirm that these DoD contracts are not “akin to a species of joint venture.”⁶⁹⁰

414. The EU’s argument, supported by a single footnote to a single piece of evidence (which the EU misperceives) does not “thoroughly scrutinize the measure” or “identify *all* relevant characteristics of the measure.” It accordingly fails to meet the EU’s burden of proof. A thorough analysis of the evidence, which the United States provides below, establishes that DoD

⁶⁸⁹ *US – Large Civil Aircraft (Panel)*, para. 7.1148-7.1157, 7.1162-7.1171.

⁶⁹⁰ *US – Large Civil Aircraft (AB)*, para. 624.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 135

contracts funded through the “military aircraft” program elements are purchases of goods or services, depending on the contract.

415. The EU’s lone evidentiary footnote appears in attempted support of the assertion that “{t}he precise nature of the R&D is determined collaboratively by DoD and Boeing,”⁶⁹¹ and references the fact that the statement of work for one Air Force contract is on Boeing letterhead. But this fact does not have the significance the EU attributes to it. In systems acquisitions, DoD does not write statements of work for contractors. It identifies performance “requirements,” and the contractors propose ways to meet those requirements. In a bidding situation, DoD then chooses the bid that provides the best combination of performance, cost, and other relevant criteria. DoD is precluded by law and regulation from collaborating with contractors during the drafting of proposals, as that would create a conflict of interest in the evaluation process. Between submission of bid and award, DoD may ask for clarification of a proposal, but it is again precluded in drafting amendments to the proposals. After acceptance of a bid, there may be a further negotiation of the statement of work, but DoD may also accept the initial proposal, in which case it may use the version as originally submitted by the proposer. Thus, the situation cited by the EU actually shows that there was no collaboration – DoD took the initial proposal “as is.”⁶⁹²

416. The EU also asserts that procurement contracts “involve the commitment of monetary and non-monetary resources from both DoD and Boeing.”⁶⁹³ It provides *no* evidence to support its contentions regarding non-monetary resources from DoD *or* monetary resources from Boeing. It has accordingly failed to meet its burden of proof on this score.

417. Thus, the EU has failed to meet its burden of proof. It has neither adduced credible evidence nor advanced valid arguments that DoD procurement contracts funded by the original “general research” program elements “have the same characteristics” as DoD agreements. As a matter of U.S. law, a procurement contract is the proper instrument when the principal purpose is the acquisition of supplies or services for the direct benefit or use of the federal government. An agreement is only appropriate when the purpose of the transaction is assistance, and there is no fee or profit to pay to the other party.⁶⁹⁴ Moreover, the evidence cited above shows that, as a matter of fact, the exclusive purpose of the DoD contracts funded through the original “general research” program elements is the acquisition of knowledge for military purposes, and not to conduct dual-use research.

⁶⁹¹ EU FWS, para. 367.

⁶⁹² In some situations, when DoD is seeking to upgrade a system, it may conclude that the original vendor is uniquely qualified to perform the work, and enter into a sole source contracting exercise. In that case, DoD again identifies for itself the relevant requirements, and asks the contractor for a proposal as to how to meet the requirements. The two parties will then negotiate over how to satisfy the requirement at the best cost. If the vendor’s original proposal is acceptable, DoD may incorporate it in the contract as the statement of work.

⁶⁹³ EU FWS, para. 367.

⁶⁹⁴ *US – Large Civil Aircraft (Panel)*, paras. 7.1152-7.1153.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 136

418. Consideration of the Appellate Body findings regarding pre-2007 NASA contracts confirms that these DoD contracts funded through the “military aircraft” program elements are not “akin to a species of joint venture.”

- **Finding on pre-2007 NASA contracts:** “The subjects to be researched are often determined in a collaborative arrangement between NASA and the U.S. aeronautics industry.”⁶⁹⁵ **For DoD contracts relating to programs of record:** As described earlier in this section and in section III.E.2, DoD sets requirements for weapons systems entirely through an internal process of evaluating capability needs and technology opportunities or resources. Contractors prepare proposals based on available technology and hardware or technology and hardware that can be matured in time to meet production targets. There may be back and forth as to the terms, but it takes the form of a negotiation, rather than a collaboration, with each side trying to get the optimal terms for itself.

- **Finding on pre-2007 NASA contracts:** “Some of the transactions involved NASA providing Boeing with access to its equipment, facilities, and employees” and “some of the contracts awarded to Boeing under the ACT programme provided for research teams that included NASA employees.”⁶⁹⁶ **For DoD contracts relating to programs of record:** In a program of record, access to equipment, facilities, and employees pursuant to a contract is rare. It will typically take the form of equipment to integrate into an existing system, or facilities to evaluate whether the contractor has properly performed the work required. A program of record is managed by a program office, which is responsible for ensuring compliance with the terms of the acquisition contracts, and not for helping the contractor to perform the contract.

- **Finding on pre-2007 NASA contracts:** “{T}he value of such access {to facilities, equipment, and employees} was significantly higher than the value of the payments.”⁶⁹⁷ **For DoD contracts relating to programs of record:** The EU has not pointed to a single contract for which this is the case, and the United States is aware of none.

- **Finding on pre-2007 NASA contracts:** “{T}he transactions involve NASA and Boeing pooling non-monetary resources and employees.”⁶⁹⁸ **For DoD contracts relating to programs of record:** Most of the contracts do not provide facilities or equipment, and do not reference the “pooling” of employees.

⁶⁹⁵ *US – Large Civil Aircraft (AB)*, para. 595.

⁶⁹⁶ *US – Large Civil Aircraft (AB)*, para. 594.

⁶⁹⁷ *US – Large Civil Aircraft (AB)*, para. 595.

⁶⁹⁸ *US – Large Civil Aircraft (AB)*, para. 595.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 137

- **Finding on pre-2007 NASA contracts:** “{S}cientific and technical information, discoveries, and data are among the expected outcomes of the research jointly undertaken by Boeing and NASA” and “Boeing is not required to pay any royalties to NASA for any resulting commercial rewards.”⁶⁹⁹ **For DoD contracts relating to programs of record:** This is true for situations in which a Boeing employee working on the contract, or a DoD and Boeing employee working together on the contract, invent an invention. It is not true when a DoD employee working alone invents an invention. In that case, DoD would own any invention, and Boeing would have to pay a royalty to sue the invention.

- **Finding on pre-2007 NASA contracts:** LERD clauses gave Boeing an exclusive right to exploit technology resulting from contracts in which they were “contributing a significant amount of their own resources to contract research efforts.”⁷⁰⁰ **For DoD contracts relating to programs of record:** This has never been true of DoD contracts. DoD has *always* retained (and still retains) the right to exploit for itself the results of its contracts.

Thus, almost all of the facts that led to the Appellate Body’s conclusion that pre-2007 NASA contracts were “akin to a species of joint venture” are not accurate with respect to DoD contracts funded through the original “military aircraft” program elements. The EU has accordingly failed to meet its burden of proof to establish that the post-2006 contracts were financial contributions in the form of an “investment . . . akin to a species of joint venture.”⁷⁰¹

*iii. DoD program of record contracts funded through the original
“military aircraft” program elements are purchases of either
goods or services, depending on the nature of the contract.*

419. A determination of whether these programs involved financial contributions would require evidence about the nature of each transaction, which the EU has failed to provide. That omission by itself should be fatal to the EU’s claims. To the extent the Panel considers that the EU has presented evidence on the existence of a financial contribution, the evidence supports treating these transactions as purchases of goods or services.

420. In the pre-2007 period covered by the EU discussion, all of the funding on the V-22/CV-22 went toward bringing the project to the point where full rate of production could begin. Therefore, those funds are best understood as a purchase of goods.

421. F/A-18 Squadrons funding had basically two purposes during the pre-2007 period covered by the EU discussion: bringing the F/A-18 E/F version into service and upgrading the F/A-18 C/D version planes to ensure maximum performance. Expenditures to bring the F/A-18

⁶⁹⁹ *US – Large Civil Aircraft (AB)*, para. 596.

⁷⁰⁰ *US – Large Civil Aircraft (AB)*, para. 596

⁷⁰¹ *US – Large Civil Aircraft (AB)*, para. 624.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 138

C/D version into service involve production of a new product, warranting treatment as funds for the purchase of a good. Upgrade funding is less clear-cut. If work involves modifying an existing aircraft, the proper treatment is as a purchase of services because Boeing would not be producing a new good. However, if the work required making a new component and then integrating it into the aircraft, the transaction would potentially be a purchase of goods

422. Boeing received funding under the Joint Strike Fighter program element only during the period when it was bidding to get the contract. Thus, that funding constituted a purchase of goods.

423. The C-17 is the only original program that the EU carries through to the present. Like the F/A-18, the C-17 has had two types of funding during that period: product development funding for bringing the aircraft into service, and funding to enhance and upgrade C-17s that the Air Force had already purchased. The legal result should be the same. The Panel should treat expenditures to bring the product into service as purchases of goods, and funding for enhancements and upgrades as purchases either of goods or of services, depending on whether the transaction involves production of something, or is simply a reworking of the existing aircraft.

424. The United States notes that, as explained in section III.C.4.a, any purchase of services is not a financial contribution.

d. DoD systems acquisition contracts do not confer a benefit when compared with commercial purchases of goods or product upgrades.

425. Because it has identified the financial contribution incorrectly, the EU benchmarks against a joint venture. In section III.E.4.c, the United States demonstrated that the transactions at issue were either purchases of services or purchases of goods. If the former, they, were not a financial contribution at all, for the reasons explained in section III.C.4.a. However, even if the Panel does not accept this conclusion, the fact that the United States was buying something in these transactions, and was purchasing goods in other systems acquisition contracts, must play a role in the analysis.

426. In this context, aside from the fact that the EU has not supported its assertion that no private entity contracting research services would buy only own-use rights in patents that result from the research, that assertion would be irrelevant. The proper question under the adequate remuneration standard for evaluating the benefit of a government purchase focuses on what the government paid for what it obtained. A benefit would exist only if the government paid too much for the rights it obtained. The EU has failed entirely to address that standard.

427. In this regard, the Appellate Body has found that, in situations where a transaction presents valuation difficulties, “such benchmark may also be found in price-discovery mechanisms such as competitive bidding or negotiated prices, which ensure that the price paid

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 139

by the government is the lowest possible price offered by a willing supply contractor.”⁷⁰² As the contracts themselves show, most of the DoD contracts challenged by the EU are subject to competitive bidding.⁷⁰³ Although there are some contracts that were not subject to full and open competition, these situations arose primarily because Boeing was doing follow-on work from a contract that was subject to full and open competition, or had been down-selected after a full and open competition. As this dispute shows, the former situation is completely consistent with commercial practice, as airlines frequently use sole-source purchases for follow-on sales of aircraft, parts, or upgrades. The latter situation simply reflects a process of winnowing competitors in stages, rather than all at once in an initial tender. Thus, the Panel can have a high degree of confidence that DoD did not pay more than adequate remuneration for its procurement contracts. Indeed, in this dispute the Appellate Body recognized that competitive bidding can influence the structure of NASA and DoD contracts. In particular, it noted that ‘Boeing’s monetary contribution is consideration for the enhanced data rights that it obtains under the assistance instruments, which grant more limited rights to the government over the data.’⁷⁰⁴ The variation in price to compensate for relatively stronger data rights protections for Boeing confirms that the NASA/DoD contracts reflect a negotiated bargain.

e. The benefit alleged by the EU is not specific.

428. Section III.E.3.e sets out the general legal flaws with the EU’s arguments. The United States incorporates those arguments by reference.

F. Measures that the EU Could have Challenged in the Original Proceeding, but did Not: the New Program Elements

429. The EU states quite plainly that it is seeking to bring into this proceeding “general aircraft RDT&E program elements” and “military aircraft program elements” that “were not at issue before the original panel.”⁷⁰⁵ That, of course, is precisely the problem with the EU’s effort. As these agreements funded through these program elements were “not at issue before the original panel,” there was no finding that they conferred WTO-inconsistent subsidies, and the United States accordingly had no obligation to bring them into compliance. The EU argues now that these program elements only “began to fund Boeing’s dual-use LCA-relevant research since 2007.”⁷⁰⁶ It is hard to give any credence to the EU assertions that it could not have brought its claims earlier – the very evidence it cites incorrectly as demonstrating “dual use” today was

⁷⁰² *Canada – Renewable Energy (AB)*, para. 5.228.

⁷⁰³ Any contract that is not subject to competitive bidding must contain an entry in box 13 of the standard NASA contract form indicating the reason that the contract is not subject to “full and open competition.” The absence of such an indication means that the contract was open to competitive bidding. *E.g.*, Contract NNA06BC41C, p. 1 (Exhibit USA-49(HSBI)).

⁷⁰⁴ *US – Large Civil Aircraft (AB)*, para. 664.

⁷⁰⁵ EU FWS, paras. 291 and 301.

⁷⁰⁶ EU FWS, paras. 291 and 301.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 140

available in 2005 when the EU commenced this dispute.⁷⁰⁷ Moreover, the contracts challenged under new PEs do not have a close nexus with the measures covered by the DSB’s recommendations and rulings. If anything, they are more closely connected with measures that were *not* covered by the DSB’s recommendations and rulings as a result of the EU’s own litigation tactics – namely, the DoD procurement contracts. Consequently, the EU is precluded from challenging these measures in this compliance proceeding.

430. We begin by noting that the United States and the EU are not in complete agreement as to which program elements “were not at issue before the original panel.” The EU panel request references 13 program elements that are not listed in the reports of the original panel and the Appellate Body. Of those, the EU first written submission lists eight in its section on new program elements.⁷⁰⁸ DLA ManTech (0708011S) should be added to that list, as the EU’s claims in the original proceeding with regard to ManTech listed several defense agencies, but not DLA. The EU has abandoned its claims with respect to two of the program elements referenced in the EU Panel Request: Aviation Survivability (0603216N) and KC-10S (0401219F).⁷⁰⁹ The EU first written submission also contains no reference to Technology Transition (0604858F). As the EU has made no arguments, there is nothing for the United States to rebut, and the United States asks the Panel to consider that the EU has abandoned its claims with respect to this last program element as well.

431. The United States has placed the discussion of these program elements in a separate section because they raise procedural issues different from those presented by the program elements “at issue before the original panel.” Because the number of program elements is smaller, we are addressing all of the different groups of instruments – agreements, procurement contracts funded through “general research” program elements, and procurement contracts funded through “military aircraft” program elements – together.

432. Section 1 explains why the EU’s response to the U.S. preliminary ruling request does not justify inclusion of these program elements in this compliance proceeding. Section 2 addresses the agreements and procurement contracts funded through the five new “general research”

⁷⁰⁷ For example, the DARPA “Materials Processing Technology” project, cited by the EU as evidence of dual-use research received \$141 million in 2005. 2007 Materials and Biological Technology Budget, item 16, p. 1 (Exhibit EU-73, frame 4/257). Work on the P-8A under contract N00019-04-C-3146 began in 2004, and continues today under the same instrument. And, the budget documents for that program that the EU’s consultant relied upon – but did not submit as exhibits – show essentially the same development objectives in 2004 as in 2007, when the EU asserts that it first noticed the potential for dual use. Compare MMA 2006 Budget, Exhibit R-2, item 140 (Exhibit USA-172) with P-8A 2008 Budget, Exhibit R-2, item no. 139 (Exhibit USA-173). The Air Force’s tanker program has involved the same set of technological concepts throughout its history. See section III.F.3.a.ii. However, the possibility of dual-use research appears to have become a concern to the EU only after EADS was not awarded the contract.

⁷⁰⁸ Materials and Biological Technology (0602715E); Sustainment Science & Technology (0603199F); Technology Transfer (0604317F); Aviation Safety Technologies (0606301D8Z); AWACS (0207417F); KC-46 (0605221F); P-8A (0605500N); and Long Range Strike Bomber (0604015F).

⁷⁰⁹ EU Supplemental Submission, para. 18.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 141

program elements. There were actually only ten such contracts and one agreement, the majority of them falling under DARPA’s Materials and Biological Technology program element (0602715E). In many cases, they were not the main source of funding for the instruments in question. In all cases, the technologies had clear military uses, and the contracts make no reference to the possibility of civil uses. The remainder of the section demonstrates that the relevant agreements were a financial contribution “akin to a species of joint venture,” while the procurement contracts were purchases of services that are not a financial contribution for purposes of Article 1.1(a)(1) of the SCM Agreement. Regardless of the findings regarding financial contribution, none of the transactions conferred a benefit for purposes of Article 1.1(b) of the SCM Agreement, and they were not specific.

433. Section 3 addresses the procurement contracts and the agreement funded through the four new “military aircraft” program elements. The section demonstrates that the EU depiction of these programs misses facts critical to understanding the nature, structure, and operation of the instruments they funded. The objective of these instruments was the production of new weapons systems or the improvement or upgrade of existing weapons systems. The remainder of the section demonstrates that the procurement contracts were not financial contributions “akin to a species of joint venture.” Instead, they were either purchases of services, which are not a financial contribution for purposes of Article 1.1(a)(1), or purchases of goods. Regardless of the findings regarding financial contribution, none of the transactions conferred a benefit for purposes of Article 1.1(b) of the SCM Agreement, and they were not specific.

434. Therefore, even if the new program elements are properly within this Panel’s terms of reference, the EU has failed to make a *prima facie* case that they are subsidies.

1. Contracts under “new” program elements are not properly within the terms of reference of this compliance panel.

435. The EU could have challenged contracts under the “new” program elements during the original proceeding, but it opted not to do so. Consequently, the DoD contracts under “new” PEs are outside the scope of this dispute.

436. The EU does not contest the understanding of Article 21.5 of the DSU expressed in a number of adopted panel and Appellate Body reports that Members generally may not bring claims in compliance proceedings that they could have brought in original proceedings but opted not to.⁷¹⁰ The EU also does not deny that it could have challenged DoD contracts with Boeing under all of the “new” PEs during the original dispute.⁷¹¹ Rather, the EU cites certain “new facts and evidence” which supposedly excuse its failure to raise these claims in the original dispute. However, as discussed above, these facts are merely the EU’s decision to challenge only post-2006 contracts under the “new” PEs. However, the EU fails to demonstrate that it could not have challenged pre-2006 contracts under the “new” PEs during the original dispute.

⁷¹⁰ See *US – Zeroing (21.5) (EC)*, para. 432.

⁷¹¹ See EU Supplement Submission, paras. 16-20.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 142

Furthermore, for the P-8A, the EU admits that it could have challenged the measure in 2006, and that it had decided by 2007 that the measure was WTO-inconsistent and related to the dispute.⁷¹²

437. Because the EU defined the scope of the original dispute in a manner that excluded these “new” program elements, the EU is precluded from challenging assistance instruments and contracts under these in the context of this compliance proceeding.

2. *The EU has not demonstrated that contracts and agreements funded through the new “general research” program elements are specific subsidies.*

a. The DoD contracts and agreements funded through the new “general research” program elements are driven by military needs and objectives.

i. Materials and Biological Technology (PE 0602715E)

438. During the 2007-2012 period, DARPA funded three contracts and four agreements under this program element,⁷¹³ for a total of somewhat less than \$[BCI].⁷¹⁴ All of them had military objectives:

- Contract HR0011-05-C-0068 involved research into the properties of negative index metamaterials (“NIMs”) with a view to [[HSBI]];⁷¹⁵
- Contract HR0011-06-C-0073 called for research for power systems for unmanned underwater vehicles;⁷¹⁶
- Contract HR0011-08-C-0044 provided for [[HSBI]] for a use that is ITAR controlled;⁷¹⁷
- Agreement MDA972-03-2-0003 was issued as part of DARPA’s Thermal to Electric Conversion Program, based on a Boeing proposal for a solid state thermal engine;⁷¹⁸

⁷¹² EU Supplemental Submission, para. 20.

⁷¹³ As these four agreements are the only agreements funded by one of the new “general research” program elements, the United States will address them in this section, rather than creating an entirely separate section to address them.

⁷¹⁴ *Other DoD entities’ obligations for each contract and agreement* (Exhibit USA-157(BCI)); *Funds obligated to Air Force Agreements with Boeing* (Exhibit USA-0158 (BCI)). In addition to the six DARPA agreements funded under this program element, DARPA also funded an Air Force agreement, Agreement FA8650-07-2-7716 (Exhibit USA-165(HSBI)). *DoD Cooperative Agreements, TIAs, and OTAs, 2007-2012* (Exhibit USA-159).

⁷¹⁵ Contract HR001-05-C-0068, Attachment 1, p. 1 (Exhibit USA-160(HSBI)).

⁷¹⁶ *DoD contracts funded by program elements challenged by the EU, FY2007-FY2012* (Exhibit USA-0161).

⁷¹⁷ Contract HR0011-08-C-0044, SOW, p. 1 (Exhibit USA-162(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 143

- Agreement HR0011-06-2-0008 provided for research into amorphous metals technology for space structures, specifically to [[HSBI]];⁷¹⁹
- Agreement FA8650-07-2-7716 calls for research to bring non-autoclave manufacturing technologies [[HSBI]];⁷²⁰ and
- Agreement HR0011-10-2-0001 seeks [[HSBI]].⁷²¹

None of the research under these instruments referenced a civil use for the relevant technology. In several cases – engine research, submarine power systems, and [[HSBI]] – there is not even a plausible link to the EU’s claims regarding non-engine aeronautics research. In other instances, ITAR controls on discussing even the objective of the effort indicates further unlikelihood of civil utility.

ii. Sustainment Science & Technology (PE0603199F)

439. This program element provided funding for two delivery orders under Contract FA8650-08-D-3857 during the 2007-2012 period: [BCI] toward D.O. 20 and [BCI] toward D.O. 21.

iii. Technology Transfer (PE 0604317F)

440. This program element contributed to one contract during the 2007-2012 period.⁷²² AFRL’s Directed Energy Directorate aimed “to develop, test and demonstrate a multi-shot and multi-target aerial HPM {High-Power Microwave} demonstrator that is capable of degrading damaging, or destroying electronic systems”⁷²³ This research has a clear military objective, and the potential civil applications are not an objective

iv. Aviation Safety Technologies (0606301D8Z)

441. Boeing did not receive funding through this program element during the 2007-2012 period.

⁷¹⁸ Contract MDA972-03-2-0003, p. 2 (Exhibit USA-163(HSBI)). The United States notes that, as the EU has excluded engine-related technology from its claims, this particular agreement is outside the scope of those claims.

⁷¹⁹ Agreement HR0011-06-2-0008, Enclosure A, p. 2 (Exhibit USA-164(HSBI)).

⁷²⁰ Agreement FA8650-07-2-7716, Modification 4, Attachment 3, p. 1 (Exhibit USA-0165(HSBI), frame 32/53).

⁷²¹ Agreement HR0011-10-2-0001, SOW, p. 1 (Exhibit USA-166(HSBI)).

⁷²² The Air Force initially obligated funds under this program element to Contract FA8650-11-C-6153, but the full amount was deobligated before any of those funds could be disbursed. *Funds obligated under Air Force contracts with Boeing* (Exhibit USA-167).

⁷²³ Counter-Electronics High Power Microwave Advanced Missile Project (CHAMP) Joint Capability Technology Demonstration (JCTD), FedBizOpps.gov (Exhibit USA-168).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 144

v. *DLA ManTech (0708011S)*

442. This program element funded a single contract during the 2007-2012 period, with a [[HSBI]] payment for Contract W31P4Q-09-D-0029, D.O. 1, for the Apache static mast base. The Apache is a U.S. Army helicopter, and the static mast base is a part above the engine that holds the “mast” (the shaft that drives the blade) in place.⁷²⁴ This effort has an obvious military objective, and there is no mention of potential civil technology.

443. The EU notes that Boeing was involved in the “PRO-ACT” project, which received DLA ManTech funding.⁷²⁵ In fact, there were six other “participants” in that \$350,000 effort⁷²⁶ and, whatever Boeing’s role was, DoD did not make any payments to Boeing.

b. *The EU has failed to demonstrate that DoD contracts funded through the new “general research” program elements are joint ventures, when they are actually purchases of services.*

444. The United States considers that agreements funded through the original “general research” program elements “are akin to a species of joint venture” and have “characteristics analogous to equity infusions”⁷²⁷ apply equally to agreements funded through these program elements.

445. However, the U.S. observations in section III.E.3.c that procurement contracts funded through the original “general research” program elements are not “akin to a species of joint venture,” but are instead purchases of services, apply equally to procurement contracts funded through these program elements. The United States incorporates those explanations and conclusions by reference.

c. *DoD contracts and agreements funded through the new “general research” program elements do not confer a benefit when compared with commercial purchases of services.*

446. The United States explained in section III.E.3.d that the EU failed to provide a comparison to the proper benchmarks for procurement contracts funded through the “general research” program elements. That explanation applies equally to contracts funded through the new “general research” program elements. The United States incorporates those explanations and conclusions by reference.

⁷²⁴ Contract W31P4Q-09-D-0029, D.O. 1, p. 2 (Exhibit USA-169(HSBI)).

⁷²⁵ EU FWS, para. 280, *citing* Department of Defense, Manufacturing Technology Program, Digital Radiography (Exhibit EU-310).

⁷²⁶ Department of Defense, Manufacturing Technology Program, Digital Radiography (Exhibit EU-310).

⁷²⁷ *US – Large Civil Aircraft (AB)*, para. 624.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 145

d. The benefit alleged by the EU is not specific.

447. The U.S. explained in section III.E.3.e that the subsidy alleged by the EU with respect to DoD procurement contracts funded through the original “general research” program elements is not specific. That explanation applies equally to procurement contracts funded through these program elements. The United States incorporates those explanations and conclusions by reference.

3. *The EU has not demonstrated that the contracts and agreements funded through the “military aircraft” program elements are specific subsidies.*

a. The contracts and agreement funded through the new “military aircraft” program elements challenged by the EU are driven by military needs and objectives.

*i. Airborne Warning and Control System (“AWACS”) (PE
0207417F)*

448. In its consultation and panel requests, the EU identified this program’s efforts to improve and upgrade the 1970s-era AWACS aircraft as part of its challenge. In its request for the Panel to seek information pursuant to Article 13 of the DSU, the EU identified information on the entire program as “necessary” for preparation of its first written submission.⁷²⁸ However, the CRA-Rumpf Report concludes that, among the many AWACS projects, only the DRAGON project to replace the AWACS avionics is dual use, and that the rest of the research under this program element has nothing to do with this dispute.⁷²⁹ However, the CRA-Rumpf report does not go far enough. The DRAGON project does not have any civil objective, and there is no evidence, beyond Richard Rumpf’s subjective impression, that the technology has civil applications.

449. The AWACS is a strictly military aircraft. It entered the Air Force inventory in the late 1970s. In recent years, the avionics system for the aircraft presented two problems: (1) it was so old that operators had trouble finding replacement parts due to diminishing manufacturing sources; and (2) it is not in compliance with new international air traffic control regulations, resulting in aircraft being precluded from most civilian airspace during peacetime.⁷³⁰ Thus, a major upgrade was necessary to bring this military aircraft up to civil aviation standards. In an international cooperative program with NATO, which operates a fleet of 17 AWACS aircraft of similar design and age as the U.S. fleet, the CNS/ATM DRAGON cooperative program involved modifications that include

⁷²⁸ Letter from the EU to the Panel (Nov. 14, 2012).

⁷²⁹ The United States notes that the EU could have saved the Panel a good deal of time, and the United States a good deal of time and expense, had it revealed this limitation on its claims before the Panel made its request for information under Article 13 of the DSU.

⁷³⁰ AWACS Budget, Exhibit R-2, item 147, pp. 2 and 5 (Exhibit EU-76, frames 39&42/68).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 146

the addition of data link communications, upgrade or replacement of emergency locating technologies, voice and data link digital radios, improved visual displays and flight management system, as well as automatic position reporting via data link {;} . . . {r}eplacement of critical avionics system that became unsustainable beginning in 2010.⁷³¹

The AWACS is based on the Boeing 707 airframe. Boeing manufactured and delivered 707s for commercial use from 1957 to 1978,⁷³² it is difficult to see information needed to upgrade the avionics to 21st century technology applications relevant to this dispute.

450. The CNS/ATM DRAGON is an international cooperative program with the NATO AEW&C Programme Management Organization (“NAPMO”). Boeing is the original equipment manufacturer of the AWACS and is bears total system performance responsibility for that military aircraft for both the U.S. and NATO fleets. Under Contract F10628-01-D-0016 with Boeing, the U.S. Air Force awarded Delivery Order 73 to perform the CNS/ATM DRAGON upgrade for both the U.S. and NATO fleets. It provided for initial development and installation of modifications on one U.S. AWACS aircraft and one NAEW&C aircraft. Production is not a part of this international cooperative program. The U.S. and NAPMO/NATO will handle production separately as they see fit, and not as a cooperative effort. The Statement of Work for D.O. 73 is subject to Distribution F limitations, designed specifically for this international cooperative project, restricting distribution of the contents to the U.S. DoD and NAPMO/NATO. The information may be shared with non-NAPMO/NATO nations for military purposes only, with the express, written permission of the United States. This restriction clearly indicates that any technology and related technical data/computer software developed under this Delivery Order has little application in the civilian sphere.

ii. KC-46 (0605221F)

451. The U.S. Air Force’s fleet of KC-135 aerial refueling tankers is currently the oldest weapon system that DoD maintains, with an average age of 51 years.⁷³³ Efforts to replace these aircraft go back more than a decade. An initial effort to acquire use of new tankers through a lease was cancelled after revelations of improper behavior by officials involved in the bidding process.⁷³⁴ In 2006, the Air Force commenced a second procurement effort, and issued a request for proposals in 2007. Boeing and Northrop Grumman both bid for the project, with Boeing proposing a militarized version of the 767 and Northrop Grumman, working in tandem with EADS, proposing a militarized version of the Airbus A330. The Air Force awarded the contract to Northrop Grumman in 2008, but Boeing protested the award. The Comptroller General of the

⁷³¹ AWACS Budget, Exhibit R-2, item 147, pp. 2 and 6 (Exhibit EU-76, frame 43/68).

⁷³² Boeing, History: 707/720 Commercial Transport (Exhibit USA-251)

⁷³³ Comptroller General of the United States, Decision in the Matter of The Boeing Company, p. 4 (June 18, 2008) (Exhibit USA-235).

⁷³⁴ Christopher Drew, *Boeing Wins Contract to Build Air Force Tankers*, New York Times (Feb. 24, 2011) (Exhibit USA-236).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 147

United States overturned the award, finding that the Air Force failed to evaluate the proposals in accordance with the system laid out in the request for proposals.⁷³⁵

452. The Air Force undertook a third competition shortly thereafter. Northrop Grumman declined to participate. However, EADS indicated its willingness to make an independent offer, and the Air Force extended the bidding deadlines to provide additional time for EADS to draft its proposal.⁷³⁶ After evaluating detailed proposals from both parties, the Air Force awarded the contract to Boeing, noting that Boeing's cost proposal was more than one percent lower than that of EADS.⁷³⁷

453. The resulting contract was a fixed price incentive firm target contract.⁷³⁸ Under this type of instrument, the contract has a ceiling price. If the contractor can perform the work for less than the ceiling price, it gets to keep a percentage of the money it saved. However, if costs exceed the ceiling, the contractor has to pay the excess. In light of the way costs are accumulating, both DoD and Boeing expect that the project costs will exceed the ceiling.⁷³⁹

454. The EU argues that the technologies developed to convert the 767 into the KC-46 will also have uses for Boeing's civil aircraft. It focuses on changes to the airframe and the use of modern computers, avionics, and sensors. As so often is the case in this proceeding, the EU and its experts misunderstand the significance of the work. In DoD's view, "a fixed price development contract is appropriate for this program because KC-46 development is considered to be a relatively low-risk effort to integrate mostly mature military technologies onto a well-defined commercial derivative aircraft."⁷⁴⁰ In other words, the tanker project does not involve the discovery of new technologies with exciting new uses. It is about combining military technologies already well known to both Boeing and EADS and making them work together to achieve military objectives.

455. The most significant statistic about the project is one the EU gives short shrift – that 80 percent of the KC-46 is derived from civil hardware.⁷⁴¹ Thus, the advantage the Air Force gets from leveraging technology developed on Boeing's commercial aircraft far exceeds any

⁷³⁵ Comptroller General of the United States, Decision in the Matter of The Boeing Company, pp. 3-5 (June 18, 2008) (Exhibit USA-235).

⁷³⁶ Christopher Drew, *Boeing Wins Contract to Build Air Force Tankers*, New York Times (Feb. 24, 2011) (Exhibit USA-236).

⁷³⁷ Christopher Drew, *Boeing Wins Contract to Build Air Force Tankers*, New York Times (Feb. 24, 2011) (Exhibit USA-236).

⁷³⁸ U.S. Government Accountability Office, *KC-46 TANKER AIRCRAFT: Program Generally Stable but Improvements in Managing Schedule Are Needed*, Report 13-258, p. 1 (Feb. 2013) (Exhibit USA-237).

⁷³⁹ U.S. Government Accountability Office, *KC-46 TANKER AIRCRAFT: Program Generally Stable but Improvements in Managing Schedule Are Needed*, Report 13-258, p. 5 (Feb. 2013) (Exhibit USA-237).

⁷⁴⁰ U.S. Government Accountability Office, *KC-46 TANKER AIRCRAFT: Program Generally Stable but Improvements in Managing Schedule Are Needed*, Report 13-258, p. 4 (Feb. 2013) (Exhibit USA-237).

⁷⁴¹ EU FWS, paras. 305-307.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 148

advantage Boeing's commercial operation could theoretically derive from the company's work for the Air Force.

456. The EU also misses the significance of the bidding process. Boeing and EADS are companies with a high degree of knowledge about the markets for civil and military aircraft. If the tanker contract really involved technologies with great use in the civil sector, both would have been aware of those advantages, and taken them into account in formulating their bid packages. Thus, the bids would reflect the perceived value of what the bidders expected to get in terms of money, experience, and technology development. There was no excessive reimbursement.

457. The known outcome of the process – that Boeing's bid was a least one percent lower than EADS's⁷⁴² – demonstrates the commercial reasonableness of the outcome. If the Air Force had not accepted Boeing's bid, its only alternative would have been to pay EADS *more* to achieve the desired capabilities. This fact provides irrefutable proof that the Air Force did not pay Boeing more than adequate remuneration.

iii. P-8A (0605500N)

458. The P-8A program had its origins in a determination by the JROC in 2000 that it was necessary to replace the aging P-3 and EP-3 sub-chasing aircraft, leading to approval of Milestone 0 for concept exploration. The Navy commissioned studies from Boeing and three other companies as to how to meet that need through a "Multi-Mission Maritime Aircraft" ("MMA").⁷⁴³ In 2002, the Navy decided on an acquisition strategy of first conducting a full and open competition for the Concept and Design ("CAD") phase, which was awarded to two contractors to define different approaches to meeting the requirement and evaluating the risks of the chosen approach. This was followed by a limited competition between the CAD contractors for the Engineering and Manufacturing Development ("E&MD") phase. Boeing proposed to produce a derivative of its existing civil B737 aircraft, involving changes to the structure of the aircraft and addition of equipment to serve the military mission. Lockheed Martin proposed a P-3 derivative known as Orion 21. Milestone B was approved in 2004 to enter into the E&MD phase, and the Navy awarded Boeing Contract N00019-04-C-3146 to develop and demonstrate the system, with plans to enter production and deployment in 2010.⁷⁴⁴ Following a Critical Design Review, Boeing received approval to fabricate flight test aircraft in 2007.⁷⁴⁵ Milestone C was completed, as planned in 2010, and the program moved into Low Rate Initial Production ("LRIP") as part of the production and deployment phase.⁷⁴⁶ The Navy issued a separate

⁷⁴² Christopher Drew, *Boeing Wins Contract to Build Air Force Tankers*, New York Times (Feb. 24, 2011) (Exhibit USA-236).

⁷⁴³ 2002 Depot Maintenance Budget, Exhibit R-2, item no. 215, p. 20 and 22 (Exhibit USA-0171).

⁷⁴⁴ MMA 2006 Budget, Exhibit R-2, item 140, p. 1 (Exhibit USA-0172); P-8A 2012 Budget, Exhibit R-2, line item 136, p. 6 (Exhibit USA-0173)

⁷⁴⁵ P-8A 2010 Budget, Exhibit R-2, item 133, p. 3 (Exhibit USA-0174).

⁷⁴⁶ P-8A 2014 Budget, Exhibit R-2, item 134, p. 6 (Exhibit USA-260).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 149

contract to Boeing (N00019-09-C-0022) for the first three LRIP lots. Another contract (N00019-12-C-0112) was awarded to Boeing for the last LRIP lot with an option for the first full rate production lot, pending DoD approval.⁷⁴⁷

459. The Navy plans an evolutionary acquisition strategy of continuous improvement and integration of new capabilities into the aircraft as they are produced, as a way of maintaining the effectiveness of the system against emerging threats.⁷⁴⁸ The first set of enhancements, in the process of development in parallel with initial deployment, sought, among other things, to update the tactical operations center and add new capabilities in anti-submarine warfare, anti-surface warfare, and ISR.⁷⁴⁹

460. The military objective of this effort is obvious – the Navy needed a new aircraft to serve a number of roles, particularly with regard to airborne hunting for submarines. It undertook a competition to get the best product for the lowest price. Potential civil uses of the aircraft or its technology were not an objective.

461. Although this program was devoted to converting a civil product – a 737 airframe – into a military product capable of submarine hunting and other activities related to maritime military activities, the EU believes that the development activities had civil uses, and many of them. According to the CRA-Rumpf Report, fully two thirds of the value of the research under this program was in actuality dual-use technology.⁷⁵⁰ As examples, the EU notes that the P-8A marked the first time Boeing used raked wingtips on a 737 airframe, and that the company has since made them an option on the 737 MAX. The EU notes CRA-Rumpf’s opinions that other features of the P-8A could have use for large civil aircraft: a system for shaking ice off of wings, an open-architecture flight management system, and the use of improved physics-based modeling in the design and production process.⁷⁵¹ The EU further asserts that Boeing could learn from government officials’ experience with program management.⁷⁵² And finally, the EU notes that “{a}t the Navy’s insistence,” Boeing built a new production line especially for the P-8A. To the EU’s view, all of these are examples of “dual-use” nature of Boeing’s efforts on the P-8A. However, these examples only serve to illustrate the flaws in the EU’s approach to dual-use technology.

462. First, the EU is greatly exaggerating the utility of P-8A development activity in Boeing’s future business. While it is true that government program managers are highly skilled, their

⁷⁴⁷ P-8A 2014 Budget, Exhibit R-2, item 134, pp. 12-13 (Exhibit USA-260).

⁷⁴⁸ P-8A 2008 Budget, Exhibit R-2, item 139, p. 1 (Exhibit USA-259).

⁷⁴⁹ P-8A 2012 Budget, Exhibit R-2, item 136, p. 12 (Exhibit USA-173).

⁷⁵⁰ Based on Rumpf’s reading of budget summaries, the total value of the P-8A RDT&E program element from 2007 to 2012 was \$5,715,634, of which \$3,701,980 was “Boeing dual use.” CRA-Rumpf Report, Annex D (Exhibit EU-23).

⁷⁵¹ CRA-Rumpf Report, paras, 310-311.

⁷⁵² CRA-Rumpf Report, para. 312.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 150

skills focus on moving projects through the federal acquisition process. As the United States explains in the section of this submission regarding technology effects, the pace is vastly slower than in the commercial world. Thus, it is hard to envisage much of what Boeing employees glean from interactions with government officials transferring to commercial work they may do.⁷⁵³ These few examples advanced by CRA and Rumpf do not justify the very high percentages of “dual use” they divine, based exclusively on their subjective impressions and devoid of evidence.

463. Second, the EU fails to realize the import of its examples. It notes that Boeing developed the “in-line build” process “at the Navy’s insistence.”⁷⁵⁴ Boeing proposed this approach without Navy involvement. Boeing did not see the separate product line as a lucrative give-away to its commercial interests, but as an asset useful almost exclusively for government work – in colloquial terms, a white elephant. Although Boeing staff may view the line as “an industry first,”⁷⁵⁵ they notably do not predict that it has much commercial utility.

464. Third, the EU looks at only one side of the relationship, cataloguing in detail potential uses for DoD-funded technology in the commercial sector. However, it consistently ignores evidence of *actual* uses for Boeing’s commercial technology in the military sector. Thus, for the P-8A, it focuses on the few isolated examples outlined in its submission, while disregarding that Boeing could only achieve those capabilities in the military sphere because of the knowledge base it developed of the 737 through work in the commercial sphere. For example, the raked wingtips were originally designed on the 767 and applied to the P-8 in response to derived operational requirements for use in continuous icing conditions. Thus, assuming *arguendo* that the EU is correct that two-thirds of the development of the P-8A was dual use (a position with which the United States disagrees), under that low standard, *all* of the development work on the 737 was dual use, since the P-8A uses 100 percent of a 737 airframe.

465. This last flaw becomes particularly significant because of the implications of the identification of research as “dual use” later in the EU analysis. Specifically, the EU considers that when DoD pays for the development of a technology with civil uses, it is essentially conferring a non-commercial gift on Boeing’s civil aircraft operation. But if this is the case, then the same must hold true for the use by Boeing’s military division of technology developed on the civil side. Using the EU’s low threshold for dual use, that means that there is a greater “gift” flowing from Boeing’s civil aircraft to military aircraft. If the EU were correct that such knowledge flow was useful to evaluating the benefit, that imbalance would mean that Boeing’s civil operation is giving more than it gets from the transaction and, therefore, that the transaction considered as a whole did not gift the civil operation with technology or knowledge. Or, to view the situation from the perspective of Article 1.1(b) of the SCM Agreement, the fact that Boeing’s commercial customers pay for Boeing to develop civil technologies with potential military

⁷⁵³ It is worth noting that Boeing has separate divisions to handle government acquisition work and commercial work precisely because the skill sets are so different.

⁷⁵⁴ EU FWS, para. 313.

⁷⁵⁵ EU FWS, para. 313.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 151

applications, and do not demand some kind of recompense when Boeing then uses them in a military transaction demonstrates that the leveraging of knowledge identified by the EU is perfectly normal in a commercial transaction.

466. In sum, the EU's depiction of the P-8A misses most of the key facts. It ignores the military objective of the program and absence of any civil objective, exaggerates the applicability of any knowledge gained, and disregards the knowledge flow from civil to military. These errors are fatal to the legal conclusions it seeks to draw regarding the existence of a financial contribution and a benefit.

iv. Long-Range Strike Bomber (0604015F)

467. This program element provided [BCI] in funding for Agreement FA8650-04-2-3449. That agreement also received funding through program element 0603211F, which was included within the panel and Appellate Body findings regarding agreements funded through the 23 original program elements. Therefore, the terms of this agreement were modified by the Supplemental Subject Invention and Patent License Agreement to come into compliance with the recommendations and rulings of the DSB with regard to agreements funded through program element 0603211F.⁷⁵⁶

468. This program element also provided:

- [BCI] for [[HSBI]] under Contract F33615-00-D-3052, D.O. 90;⁷⁵⁷
- [BCI] for [[HSBI]] under Contract FA8650-08-D-3857;⁷⁵⁸ and
- [BCI] for Phase II of research into automated aerial refueling under Contract FA8650-09-C-3092.⁷⁵⁹

These efforts had obvious military utility, and made no reference to potential civil uses. This program element also contributed [BCI] to Contract F33615-03-D-2358, D.O. 7.

469. Boeing did not otherwise receive funding through this program element during the 2007-2012 period.

⁷⁵⁶ Supplemental Invention and Patent License Agreement, Attachment A (Exhibit EU-401(BCI)).

⁷⁵⁷ Contract F33615-00-D-3052, D.O. 90, SOW, p. 1 (Exhibit USA-0177(HSBI)).

⁷⁵⁸ Contract FA8650-08-D-3857, D.O. 1, p. 1 (Exhibit USA-0178(HSBI)).

⁷⁵⁹ Game-Changer: USA Developing UAV Aerial Refueling, defenseindustrydaily.com (Jan. 7, 2013) (Exhibit USA-0179).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 152

- b. The EU has failed to demonstrate that contracts funded through the “military aircraft” program elements are joint ventures, when they are actually purchases of goods not covered by the EU claims or purchases of services that are not a financial contribution.*

470. The U.S. observations in section III.E.4.c that procurement contracts funded through the original “military aircraft” program elements are not “akin to a species of joint venture,” but are instead purchases of goods and or purchases of services, apply equally to procurement contracts funded through these program elements. The United States incorporates those arguments and conclusions by reference.

471. Specifically:

- the AWACS DRAGON project contract should be treated as a purchase of goods, as it involves the installation of “commercial off-the-shelf gear” and other hardware into U.S. Air Force and NATO aircraft;
- the KC-46 contract should be treated as a purchase of goods because it is a fixed-price contract for the purchase of finished tanker aircraft;
- the P-8 contracts should be treated as purchases of goods because their objective is to obtain test aircraft and the initial aircraft for deployment on mission; and
- the contracts funded through the Long-Range Strike Bomber were [[HSBI]] so they are best treated as purchases of services.

- c. DoD procurement contracts funded through the “military aircraft” program elements do not confer a benefit when compared with commercial purchases of goods or product upgrades.*

472. The United States explained in section III.E.4.d that the EU failed to provide a comparison to the proper benchmarks for procurement contracts funded through the “military aircraft” program elements, regardless of their classification as purchases of goods or purchases of services. That explanation applies equally to procurement contracts funded through these program elements. The United States incorporates those explanations and conclusions by reference.

- d. The benefit alleged by the EU is not specific.*

473. The U.S. explained in section III.E.4.e that the subsidy alleged by the EU with respect to DoD procurement contracts funded through the original “military aircraft” program elements is not specific. That explanation applies equally to procurement contracts funded through these program elements. The United States incorporates those explanations and conclusions by reference.

G. FAA Continuous Lower Energy, Emissions, and Noise (CLEEN) Program

474. The EU’s claims regarding the Federal Aviation Administration’s (FAA) CLEEN program are based on unsubstantiated analogies to the NASA measures subject to the DSB’s recommendations and rulings. They reflect a fundamental misunderstanding of the nature of the CLEEN program, which is surprising, given that it appears similar to the EU’s own Clean Sky Initiative. An accurate depiction of the CLEEN program makes clear that it is outside the terms of reference of this compliance panel and, in any event, is not a specific subsidy to Boeing. The EU appears to be looking for new measures to challenge, even if this comes at the expense of legitimate and non-discriminatory environmental measures such as the FAA CLEEN program.

1. *The CLEEN program is not within the terms of reference of this compliance proceeding.*

475. The U.S. Preliminary Ruling Request⁷⁶⁰ and the U.S. Reply to the EU’s Response to the U.S. Preliminary Ruling Request⁷⁶¹ have already explained in detail that the EU’s claims regarding the CLEEN program are not within the terms of reference of this compliance proceeding. In the following section, the United States repeats the arguments from its previous communications to the Panel only to the extent necessary to respond to the EU’s most recent assertions regarding the terms of reference of this proceeding.⁷⁶²

476. The FAA CLEEN program is not a “declared” measure taken to comply, nor does it satisfy the close nexus test set out by the Appellate Body, which involves an examination of the nature, effects, and timing of an alleged undeclared measure taken to comply.⁷⁶³ The CLEEN program was established to accelerate the development of technologies to reduce the fuel burn, emissions, and noise of civil subsonic jet aircraft.⁷⁶⁴ These program goals are similar to the objective of the EU’s Clean Sky Initiative, which the EU claims will “reduc{e} the environmental footprint of aviation (*i.e.*, emissions and noise reduction but also green life cycle) for our future generations.”⁷⁶⁵

477. The CLEEN program does not bear a close nexus in terms of nature with the NASA measures that were subject to the DSB recommendations and rulings, or to the United States’

⁷⁶⁰ U.S. PRR, paras. 36-44.

⁷⁶¹ U.S. Reply to EU Response to Preliminary Rulings Request, paras. 65-71.

⁷⁶² EU FWS, paras. 229-232.

⁷⁶³ *US – Zeroing (21.5 – EC) (AB)*, para. 204.

⁷⁶⁴ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU*, (Feb. 28, 2013) para. 85 (Exhibit USA-198).

⁷⁶⁵ Clean Sky, [http:// www.cleansky.eu](http://www.cleansky.eu) (Exhibit USA-229).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 154

declared measures taken to comply.⁷⁶⁶ The EU’s assertion that the CLEEN program is a “continuation of” the NASA measures because they share common goals is simply wrong.⁷⁶⁷ To the extent there is any “continuation” of prior NASA work in this area, it is through the Environmentally Responsible Aviation (“ERA”) Project. The 2008 documents the EU relies on to overstate NASA’s role in the development of CLEEN merely confirm that NASA and the FAA shared a common goal of “ensur{ing} that the environmental impact of aviation is significantly reduced.”⁷⁶⁸ However, sharing common environmental goals is not a sufficient basis for finding the existence of a close nexus, as most U.S. Government agencies seek to lower energy consumption and reduce pollution. Indeed, these are government-wide objectives for most Members, including the EU. To be sure, the FAA consulted selected NASA experts as it developed the CLEEN solicitation, just as it consulted various other experts inside and outside of government.⁷⁶⁹

478. The EU has not, however, demonstrated that the CLEEN program bears a close nexus in terms of nature with the specific NASA measures covered by the DSB’s recommendations and rulings. As the United States explained in its preliminary rulings request, the FAA operates CLEEN like it does its other programs, which the EU has never challenged, and works differently than NASA and the other agencies in several important respects.⁷⁷⁰ For example, the CLEEN program authorizes cost-sharing arrangements only, where the program participant must provide funding on a 1:1 basis, at a minimum. The EU identifies no NASA agreements that are similarly structured.

479. Moreover, the EU makes no allegations about how the potential effects of the CLEEN program would undermine compliance achieved through the U.S. declared measures taken to comply. As the United States also explained in its preliminary ruling request,⁷⁷¹ and as discussed above, during the six-month compliance period in 2012, NASA modified the rights accorded to the parties under the contracts covered by the recommendations and rulings of the DSB to make them consistent with commercial practice. The FAA did not begin an environmental program, available to foreign as well as domestic companies, to undermine or counteract the reallocation

⁷⁶⁶ The EU does not assert in its written submission that the CLEEN program shares a close nexus in terms of the nature of the DoD measures subject to the DSB’s recommendations and rulings. The United States again recalls that the EU has made no allegations that any of the DoD assistance instruments covered by the DSB’s recommendations and rulings targeted aircraft emissions, energy use, or noise.

⁷⁶⁷ EU FWS, para. 230. The EU appears to have narrowed its close-nexus assertion by focusing only on the NASA measures subject to the DSB’s recommendations and rulings. *See also*, EU Supplemental Submission on U.S. Preliminary Rulings Request, para. 26.

⁷⁶⁸ *See, e.g.*, EU FWS, paras. 201, 230; Exhibit EU-21; and Exhibit EU-267.

⁷⁶⁹ Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU, (Feb. 28, 2013) para. 93 (Exhibit USA-198).

⁷⁷⁰ U.S. Preliminary Rulings Request, para. 40.

⁷⁷¹ U.S. Preliminary Rulings Request, para. 43.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 155

of patent rights taken in response to the DSB’s recommendations and rulings. Thus, the CLEEN program does not bear a close nexus with the NASA measures in terms of effects.

480. To date, the EU has failed to provide any justification for the inclusion of these claims. The United States therefore respectfully reiterates its request to the Panel to find that the CLEEN program falls outside its terms of reference.

2. *The CLEEN program is not a specific subsidy to Boeing.*

a. The EU overstates any financial contribution provided by the CLEEN program.

481. Even aside from the fact that the CLEEN program is outside the Panel’s terms of reference, the EU errs in claiming that the CLEEN program is a specific subsidy. The EU asserts that the CLEEN program provides a financial contribution to Boeing in the form of (i) funding; (ii) access to government facilities, equipment and employees; and (iii) the transfer of patent and intellectual property rights.⁷⁷² However, the EU’s assertions regarding categories (ii) and (iii) are wrong.

482. First, the CLEEN program does not provide Boeing with access to government facilities, equipment or employees. The EU’s assertion regarding facilities and equipment is based on a reference in the Boeing OTA to “Facilities and Equipment.”⁷⁷³ However, the full text reads “{t}he remaining \$1,610,150.00 of FY2011 funds is Facilities and Equipment.”⁷⁷⁴ This is a reference to the type of funding available in FAA’s system (*i.e.*, Operations, R&D, F&E, etc.) and does not mean that FAA actually provides facilities and equipment. Rather, this is an account that is used to pay for research and development that improves air navigation facilities and equipment and aviation safety systems.

483. Similarly, the EU is simply wrong when it claims that the FAA provides Boeing with access to employees. The EU offers no evidentiary support for its claim. To be clear, the FAA does not provide Boeing with access to employees.

484. Second, the EU’s assertion that the FAA’s alleged “transfer” of patent and intellectual property rights to Boeing constitutes a provision of “goods” under Article 1.1(a)(1)(iii) of the SCM Agreement is wrong. As discussed above at Section III.C.4.b, intellectual property is not a “good” and the original panel rejected the EU’s argument that the attribution of intellectual property rights under government contracts was a financial contribution separate from the EU allegations regarding payments, facilities, equipment and employees.

⁷⁷² EU FWS, paras. 218-219.

⁷⁷³ EU FWS, para. 218, note 512.

⁷⁷⁴ Boeing CLEEN Agreement, p. 56 (Exhibit EU-17).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 156

485. Moreover, the CLEEN program does not “transfer” patent and intellectual property rights to Boeing. As explained above at Section III.C.4.b, under U.S. law, by default, a patent is the property of the natural person who made the invention. In the absence of an alternative contractual arrangement, a Boeing employee working for Boeing on a project funded by the CLEEN program would own the rights to any invention made by the employee. If the FAA does not own the rights to the patent, it could not “transfer” those rights to Boeing by reason of the Boeing CLEEN Agreement. The EU has identified no provision of the Boeing CLEEN Agreement to suggest that the ordinary operation of U.S. law is inapplicable. The EU therefore fails to make a *prima facie* case that the CLEEN program constitutes the provision of goods or services under Article 1.1(a)(1)(iii) of the SCM Agreement.

b. The CLEEN program does not provide a benefit to Boeing.

486. The EU also fails to make a *prima facie* case that the CLEEN program confers a benefit under Article 1.1(b) of the SCM Agreement. Boeing’s work on CLEEN is subject to a single instrument, the FAA-Boeing OTA.⁷⁷⁵ As discussed earlier at Section III.D.3, with regard to this type of an arrangement, the benefit analysis should start with a benchmark reflecting a type of collaborative relationship “akin to a species of joint venture.”⁷⁷⁶ Such a benchmark could be the terms of a joint venture created to conduct research with results of interest to both parties. The terms of that benchmark would then need to be compared against the terms of the FAA-Boeing OTA.

487. The EU fails to identify the appropriate benchmark and conduct any such comparison. Rather, the EU simply proclaims the existence of a benefit based on an assumption that the Boeing OTA must result in the same type of distribution of intellectual property rights as the NASA and DOD measures subject to the DSB’s recommendations and rulings.⁷⁷⁷ But unsubstantiated assertions are no substitute for analysis and, in failing to identify and apply the appropriate benchmark, the EU fails to consider critical components of the OTA. For example, the CLEEN program includes a significant 1:1 minimum cost-sharing requirement. Therefore, Boeing’s contributions to the OTA under the CLEEN program must equal or exceed the FAA’s contributions. The FAA has allocated \$[BCI] to date and Boeing’s cost share significantly exceeds this amount. Additional “in-kind” use of Boeing test aircraft and facilities are also considered to be significant contributions.⁷⁷⁸

488. The minimum cost-sharing requirement, of course, impacts the benefit analysis, as do other aspects of the agreement that the EU ignores entirely. The benefit analysis requires a careful comparison of the measure to the appropriate benchmark. However, because the EU

⁷⁷⁵ DTFAWA-10-C-00030 (Exhibit USA-231(HSBI)) (USA13-179).

⁷⁷⁶ *US – Large Civil Aircraft (AB)*, para. 624.

⁷⁷⁷ EU FWS, para. 224.

⁷⁷⁸ The EU’s assertion that all of Boeing’s proprietary research is counted towards Boeing’s cost-share commitment is incorrect. *See* EU FWS, para. 208.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 157

does not undertake that analysis, much less identify a proper benchmark, the EU fails to demonstrate the CLEEN program confers a benefit under Article 1.1(b) of the SCM Agreement.

c. CLEEN is not a specific subsidy.

489. Even aside from the fact that the CLEEN program is not a subsidy, it would not be specific because it is not explicitly limited to certain enterprises within the meaning of Article 2.1(a), nor is it specific “in fact” under Article 2.1(c). The only benefit alleged by the EU is that, under the OTA, Boeing receives more favorable rights in the distribution of intellectual property rights than would be the case if a commercial actor had funded the research.⁷⁷⁹ The Appellate Body found that the attribution of patent rights, if taken as a free-standing subsidy, is not specific because it is available under any government contract, by any agency, in any sector.⁷⁸⁰ The fact that this treatment is memorialized in an instrument (*i.e.*, the FAA-Boeing OTA) does not change the fact of its widespread availability across all sectors of the U.S. economy. Thus, even if the CLEEN program provided a distribution of patent rights more favorable than under a commercial transaction – which the EU has not demonstrated – it would be consistent with the distribution of patent rights generally available under government contracts and therefore not a specific subsidy under Article 2.1(a) of the SCM Agreement. The EU’s assertion that the alleged benefit is specific under Article 2.1(c) fails for the same reason – *i.e.*, because the alleged subsidy, the allocation of patent rights common to all U.S. government contracts, is “in fact” generally available and used across industries.

H. FSC/ETI

490. The United States notified the DSB that it had enacted legislation terminating the Foreign Sales Corporation and Extraterritorial Income (“FSC/ETI”) tax benefits and that it has confirmed that Boeing did not use FSC or ETI tax benefits after 2006.

491. The EU claims that the U.S. compliance efforts with respect to FSC/ETI are deficient, stating that “Boeing continues to receive certain FSC/ETI benefits after 2006.”⁷⁸¹ However, the only evidence put forward by the EU is the same evidence that it had submitted to the original panel: a 2006 IRS memorandum.⁷⁸² The original panel already examined this evidence and weighed it against other evidence on the record, including Boeing’s 2006 annual report, which stated that “2006 will be the final year for recognizing any export tax benefits”,⁷⁸³ and a statement by Mr. James H. Zrust, the Vice President of Tax of The Boeing Company, dated July

⁷⁷⁹ EU FWS, paras. 223-224.

⁷⁸⁰ *US – Large Civil Aircraft (AB)*, para. 799.

⁷⁸¹ EU FWS, para. 397.

⁷⁸² *See* EU FWS, para. 394; *US – Large Civil Aircraft (Panel)*, paras. 7.1421-7.1428.

⁷⁸³ *See US – Large Civil Aircraft (Panel)*, para. 7.1423.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 158

20, 2009, confirming that Boeing did not receive any FSC benefits after December 31, 2006.⁷⁸⁴
The original panel concluded that:

{W}hile 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.⁷⁸⁵

Furthermore, the original panel noted a document submitted by the EU itself indicating:

that the amount of FSC/ETI subsidies in the period 2007-2024 is \$0. 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.”⁷⁸⁶

In light of all of this evidence, the original panel declined to find that Boeing would continue to receive FSC/ETI benefits in the post-2006 period.⁷⁸⁷

492. Nothing has changed since the original panel examined this question, nor has the EU submitted any evidence to suggest that it has. Accordingly, there have been no FSC/ETI benefits to Boeing since 2006, let alone since the end of the RPT, and the EU has failed to show that a measure taken to comply does not exist with respect to the DSB recommendations and rulings concerning FSC/ETI benefits to Boeing.

493. The EU indicates that it will abandon its claims if Boeing provides the U.S. Government with a statement that “Boeing has not obtained, and will not obtain, any tax benefits under the {FSC} or {ETI} tax provisions in taxable years beginning after May 17, 2006.”⁷⁸⁸ Aside from the fact that the burden is on the EU to prove that a measure taken to comply does not exist, and not on the United States, the United States would refer the EU to Mr. Zrust’s July 20, 2009 statement.⁷⁸⁹

⁷⁸⁴ See *US – Large Civil Aircraft (Panel)*, para. 7.1424.

⁷⁸⁵ *US – Large Civil Aircraft (Panel)*, para. 7.1425.

⁷⁸⁶ *US – Large Civil Aircraft (Panel)*, para. 7.1426.

⁷⁸⁷ See *US – Large Civil Aircraft (Panel)*, para. 7.1428.

⁷⁸⁸ EU FWS, para. 400.

⁷⁸⁹ *Statement of James H. Zrust (July 20, 2009) (Exhibit USA-232)*.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 159

I. Washington Measures

494. The EU contests seven measures enacted by the State of Washington or its localities.⁷⁹⁰ However, only the EU’s claim regarding a single measure – the Washington State B&O tax rate – is properly within the terms of reference of this compliance proceeding. The United States complied with the DSB’s recommendations and rulings in regard to this measure, as explained below. The EU’s remaining claims concern measures outside the terms of reference of this compliance proceeding: (i) measures challenged in the original proceeding that were not found to cause adverse effects;⁷⁹¹ or (ii) measures that are not measures taken to comply with the recommendations and rulings of the DSB.⁷⁹² Moreover, and in any case, the magnitude of these alleged subsidies are all too small to cause adverse effects, when considered in the proper analytical framework, as explained below at Sections IV.H.1.b, IV.I.1.b, and IV.J.1.

1. Washington State B&O Tax Rate

495. The original panel found that the Washington State B&O tax rate was a specific subsidy, but it also concluded that it was among a group of subsidies that were not “of a magnitude that would enable them, on their own,” to cause adverse effects.⁷⁹³ In its adverse effects analysis, the Appellate Body cumulated this subsidy with others that the United States has since withdrawn. After the DSB adopted its recommendations and rulings, the United States achieved compliance with respect to the Washington State B&O tax rate through the removal of adverse effects because the State of Washington is applying the B&O tax such that the magnitude of any remaining subsidy is too small to cause adverse effects, as discussed below at Sections IV.H.1.b, IV.I.1.b, and IV.J.1.

496. At Exhibit USA-264(BCI), the United States provides estimates of the value of this measure to Boeing based upon the most recent data available.⁷⁹⁴ Although the United States originally submitted this information in response to a question that the Panel had asked at the EU’s own urging, the EU ignores this information and instead submits its own flawed estimates

⁷⁹⁰ EU FWS, paras. 427-541.

⁷⁹¹ This includes the EU claims regarding the Washington State B&O tax credits for preproduction development; Washington State B&O tax credits for property taxes; sales and use tax exemptions for computer hardware, software and peripherals; and the City of Everett B&O tax rate reduction.

⁷⁹² This includes the EU claims regarding Washington State B&O tax credits for leasehold excise taxes and the Washington State Joint Center for Aerospace Technology Innovation (“JCATI”).

⁷⁹³ *US – Large Civil Aircraft (Panel)*, paras. 7.254, 7.302, 7.1824.

⁷⁹⁴ Exhibit USA-264(BCI) (USA13-656).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 160

based on outdated data from 2003. The Panel should disregard the EU estimates, which are not only inaccurate but also internally inconsistent.⁷⁹⁵

497. In sum, the EU has failed to establish a *prima facie* case that the adverse effects of the Washington State B&O tax rate have not been removed.

2. *The EU’s claims against measures that were not found to cause adverse effects are not within the terms of reference of this compliance proceeding.*

498. The terms of reference of a compliance proceeding are limited.⁷⁹⁶ It is a mechanism to resolve any disagreement over whether a Member has taken a measure to comply or whether a measure taken to comply is inconsistent with a covered agreement. The EU’s claims concern several measures that were challenged in the original proceeding, but were not found to be inconsistent with a covered agreement. The EU is not permitted to challenge these same measures again in a compliance proceeding. The measures existed at the time of, and were challenged in, the original proceedings, and they are unchanged – they clearly are not “measures taken to comply.”⁷⁹⁷

499. The EU’s claims regarding (i) the Washington State B&O tax credit for preproduction development; (ii) Washington State B&O tax credit for property taxes; (iii) the sales and use tax exemptions for computer hardware, software and peripherals; and (iv) the City of Everett B&O tax rate reduction, concern measures for which there is no finding of inconsistency. In particular, the original panel did not find the tax credits or the sale and use exemptions to cause serious

⁷⁹⁵ The EU asserts the value of the benefit is \$350.1 million for 2006 through 2011. EU FWS, para. 430. However, the EU’s calculation of the total value in Exhibit EU-38 includes values for years 2007 through 2011 that sum to an amount greater than \$350.1 million.

⁷⁹⁶ As the Appellate Body has explained, “{p}roceedings under Article 21.5 do not concern just any measure of a Member of the WTO; rather, Article 21.5 proceedings are limited to those ‘measures taken to comply with the recommendations and rulings’ of the DSB. In our view, the phrase ‘measures taken to comply’ refers to measures which have been, or which should be, adopted by a Member to bring about compliance with the recommendations and rulings of the DSB.” *Canada – Aircraft (21.5) (AB)*, para. 36.

⁷⁹⁷ See *US – Upland Cotton (21.5) (AB)*, para. 210 (“{A} complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be WTO-consistent in the original proceedings.”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It could be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is not inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 161

prejudice.⁷⁹⁸ The original panel did find the City of Everett B&O tax rate reduction to cause serious prejudice in the 300-400 seat LCA market,⁷⁹⁹ but the Appellate Body reversed the finding:

reverses the Panel's findings, in paragraphs 7.1823, 7.1833, 7.1854(b) and (c), and 8.3(a)(ii) and (iii) of the Panel Report, that the FSC/ETI subsidies and the B&O tax rate reductions caused serious prejudice to the interests of the European Communities within the meaning of Article 5(c) and Article 6.3(b) and (c) of the SCM Agreement with respect to the 100-200 seat and 300-400 seat LCA markets, and finds it unnecessary to rule on the United States' additional claim under Article 12.7 of the DSU⁸⁰⁰

500. The Appellate Body subsequently completed the analysis with regard to price effects in the 100-200 seat LCA market, but only made findings with respect to the FSC/ETI subsidies and the Washington State B&O tax rate reduction.⁸⁰¹ In light of the Appellate Body's reversal of the original panel's finding, there is no DSB ruling that any Washington measure other than the state B&O tax rate reduction was inconsistent with U.S. obligations under the SCM Agreement. These measures are not measures taken to comply and they are outside the Panel's terms of reference.

a. Washington State B&O tax credit for preproduction development

501. As explained above, the EU's claims concerning this measure are outside the terms of reference of this compliance proceeding. The original panel found that the Washington State B&O tax credit for preproduction development was a specific subsidy to Boeing.⁸⁰² However, the original panel did not find the tax credit to cause serious prejudice.⁸⁰³

⁷⁹⁸ *US – Large Civil Aircraft (Panel)*, para. 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.”).

⁷⁹⁹ *US – Large Civil Aircraft (Panel)*, paras. 8.3(a)(ii) and (iii).

⁸⁰⁰ *US – Large Civil Aircraft (AB)*, para. 1350(d)(iii)(A).

⁸⁰¹ *US – Large Civil Aircraft (AB)*, para. 1350(d)(iii)(B).

⁸⁰² *US – Large Civil Aircraft (Panel)*, paras. 7.139, 7.212 and 7.302.

⁸⁰³ *US – Large Civil Aircraft (Panel)*, para. 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,

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 162

b. Washington State B&O Tax Credit for Property Taxes

502. As explained above, the EU's claims concerning this measure are outside the terms of reference of this compliance proceeding. The original panel found that the Washington State B&O tax credit for property taxes was a specific subsidy to Boeing within the meaning of Articles 1 and 2 of the SCM Agreement.⁸⁰⁴ However, it did not find the tax credit to cause serious prejudice.⁸⁰⁵

c. Sales and use tax exemptions for computer hardware, software and peripherals

503. As explained above, the EU's claims concerning the sales and use exemptions for computer hardware, software and peripherals are outside the terms of reference of this compliance proceeding.

504. The original panel found that the sales and use tax exemptions are specific subsidies to Boeing within the meaning of Articles 1 and 2 of the SCM Agreement.⁸⁰⁶ However, the original panel did not find the sales and use tax exemptions to cause serious prejudice.

505. For completeness, we note the original panel estimated the amount of the subsidy, through 2006, to be \$8.3 million, based on the Washington State 2003 presentation.⁸⁰⁷ In response to the Panel's request for information, the United States submitted the estimated dollar amount of the sales and use tax exemptions for fiscal years 2006 to 2012.⁸⁰⁸ The United States also provided forecasts of the value for fiscal years 2013 through 2024.⁸⁰⁹ Despite requesting that the Panel seek this information, the EU fails to address it, and instead presents an overstated figure based on outdated data.

d. City of Everett B&O tax rate

506. As explained above, the EU has failed to establish that the United States has any compliance obligation with regard to the City of Everett B&O tax rate reduction. The EU's claims concerning this measure are therefore outside the scope of this compliance proceeding. It

cause serious prejudice to the European Communities' interests in any of the three LCA product markets identified by the European Communities in this dispute.”).

⁸⁰⁴ *US – Large Civil Aircraft (Panel)*, paras. 7.179, 7.210 and 7.302.

⁸⁰⁵ *US – Large Civil Aircraft (Panel)*, para. 1834.

⁸⁰⁶ *US – Large Civil Aircraft (Panel)*, para. 7.302.

⁸⁰⁷ *US – Large Civil Aircraft (Panel)*, paras. 7.258 and 7.302.

⁸⁰⁸ Exhibit USA-264(BCI) (USA13-656).

⁸⁰⁹ Exhibit USA-264(BCI) (USA13-656).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 163

is the EU’s burden to explain why these measures should be considered as within the scope of the compliance dispute, and the EU fails to meet this burden.

The original panel found that the City of Everett B&O tax rate reduction was a specific subsidy within the meaning of Articles 1 and 2 of the SCM Agreement. However, the original panel did not find the B&O tax rate reduction to cause serious prejudice. The EU fails to explain why the City of Everett B&O tax rate reduction should be considered within the scope of this dispute, and it fails to address this measure in its supplementary scope submission.⁸¹⁰

507. For completeness, we note that the original Panel estimated the amount of the subsidy to Boeing’s LCA division through 2006 to be \$2.2 million.⁸¹¹ In response to the Panel’s request for information, the United States submitted Exhibit USA13-327 containing information regarding the actual City of Everett B&O tax revenue from Boeing from 2006 to 2012, and projected tax revenue from 2013 to 2023.⁸¹²

508. The EU ignores the information submitted by the United States and overstates the value of the B&O tax rate reduction. The EU relies on the original panel’s estimate for years 2007 through 2011 and attempts to calculate the value for years 2012 through 2023 based on forecast data obtained from the City of Everett. The EU calculation of the total value of the B&O tax rate reduction to Boeing is overstated, as evidenced by comparing the actual B&O tax amounts provided by the United States in Exhibit USA13-327 with the forecasted values underlying the EU’s calculations in Exhibit EU-450.

3. *The measures not challenged in the original proceeding are not within the terms of reference of this compliance proceeding.*

509. The EU is precluded from challenging measures that do not constitute “measures taken to comply” with the recommendations and rulings of the DSB. As the Appellate Body observed, “{s}ome measures with a particularly close relationship to the declared ‘measure taken to comply’, and to the recommendations and rulings of the DSB, may also be susceptible to review by a panel acting under Article 21.5.”⁸¹³ In determining whether a measure has such a close relationship, relevant considerations include “the timing, nature, and effects of the various measures.”⁸¹⁴ The Washington State B&O tax credit for leasehold excise taxes and the activities of the Washington State Joint Center for Aerospace Technology Innovation (“JCATI”) do not constitute “measure taken to comply” and, therefore, are outside the terms of reference of this compliance proceeding.

⁸¹⁰ EU Supplemental Submission on U.S. Preliminary Rulings Request.

⁸¹¹ *US – Large Civil Aircraft (Panel)*, paras. 7.353-7.354.

⁸¹² *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU*, (Feb. 28, 2013), para. 125 (Exhibit USA-198).

⁸¹³ *US – Softwood Lumber CVDs (21.5) (AB)*, para. 77.

⁸¹⁴ *US – Softwood Lumber CVDs (21.5) (AB)*, para. 77.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 164

a. Washington State B&O Tax Credit for Leasehold Excise Taxes

510. The value to Boeing’s LCA division of the Washington B&O tax credit for leasehold taxes is zero, and Boeing does not claim credits for leasehold excise taxes.⁸¹⁵ The EU fails to address these facts, instead assuming that Boeing must claim the credit, but offering no supporting evidence that it has in fact done so.⁸¹⁶ Moreover, there is no close nexus between this tax credit and any of the measures subject to the DSB’s recommendations and rulings in the original panel proceeding, nor has the EU pointed to any similarities between them. Indeed, it is the EU’s burden to explain why these measures should be considered as measures taken to comply, and the EU fails to meet this burden.

511. The United States notes that the EU’s panel request also alleged that the State of Washington provided a subsidy to Boeing through the “establishment of the Dreamlifter Operations Center’ at Paine Field.” However, in its first written submission, the EU indicates that it only asserts a claim with regard to the leasehold excise tax credit for the Dreamlifter Operations Center insofar as Boeing leases the land, and therefore is eligible to benefit from the leasehold excise tax credit.⁸¹⁷ The EU therefore appears to have abandoned the claim articulated in its panel request.

b. Washington State Joint Center for Aerospace Technology Innovation

512. The EU claims that the State of Washington has provided specific subsidies to Boeing through the Washington State Joint Center for Aerospace Technology Innovation (“JCATI”). The activities of the JCATI cannot be considered “measures taken to comply” with the DSB’s recommendations and rulings because there is no close nexus with the recommendations and rulings of the DSB. The EU asserts the existence of a close nexus, but fails to provide any articulation of how the nature, effects, or timing of the measure support its assertion. Nor could it, as discussed below. Therefore, the EU’s claims with regard to the activities of the JCATI are not within the terms of reference of this dispute. Indeed, it is the EU’s burden to explain why these measures should be considered as measures taken to comply, and the EU fails to meet this burden.

i. The JCATI is not a measure taken to comply with the DSB’s recommendations and rulings.

513. The United States did not cite the activities of the JCATI as measures taken to comply with the DSB’s recommendations and rulings.⁸¹⁸ Therefore, the activities could only fall within

⁸¹⁵ U.S. Letter to Chair, p. 2 (Mar. 22, 2013) (Exhibit USA-176).

⁸¹⁶ EU FWS, paras. 483-487.

⁸¹⁷ EU FWS, paras. 482-490.

⁸¹⁸ United States Notification of the Withdrawal of Subsidies and Removal of Adverse Effects (Sept. 23, 2012) (Exhibit USA-180) (USA13-150).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 165

the terms of reference of this compliance proceeding if the EU shows that they are undeclared measures taken to comply.⁸¹⁹ The EU fails to even attempt such a showing, and in any event, the “close nexus” test confirms that they are not. Therefore, they are outside the terms of reference of this dispute. Even a brief review of the facts shows the absence of a close nexus with the DSB’s recommendations and rulings or the U.S. measures taken to comply.

514. The activities of the JCATI do not share a close nexus in terms of nature with the NASA and DoD measures. As the United States explained in response to the Panel’s request for information,⁸²⁰ the JCATI was created to:

- (a) Pursue joint industry-university research in computing, manufacturing efficiency, materials/structures innovation, and other new technologies that can be used in aerospace firms; (b) Enhance the education of students in the engineering departments of the University of Washington, Washington State University, and other participating institutions through industry-focused research; and (c) Work directly with existing small, medium-sized, and large aerospace firms and aerospace industry associations to identify research needs and opportunities to transfer off-the-shelf technologies that would benefit such firms.⁸²¹

515. Unlike the NASA and DoD measures, the JCATI “coordinates the development of higher-education aerospace programs at the University of Washington and Washington State University” and “will work to expand aerospace-related engineering research and training at both schools.” The JCATI does not function like, and its activities are not similar in any meaningful way to the measures administered by, the federal agencies. Also, JCATI funding is allocated to projects by educational institutions, not to a participating enterprise. Moreover, in terms of effects, the JCATI does not undermine the steps taken to comply with regard to the NASA and DoD measures. The activities of the JCATI are also unlike the Washington State B&O tax rate reduction, the only Washington measure subject to the DSB’s recommendations and rulings. It is difficult to conceive of how a program developed to foster the education of engineering students is akin to the reduction of a B&O tax rate. And, in terms of effects, the JCATI activities do not operate to negate the removal of any adverse effects relating to the Washington measure.

516. The EU has failed to articulate any basis to conclude that the JCATI satisfies the close nexus test, instead merely asserting that it does.⁸²² For these reasons, and as noted above at Section III.B.6, the United States respectfully requests the Panel to find that the JCATI falls outside the terms of reference of this proceeding.

⁸¹⁹ See DSU, Article 21.5; *US – Softwood Lumber CVDs (21.5) (AB)*, para. 77.

⁸²⁰ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), paras. 131-132 (Exhibit USA-198).

⁸²¹ RCW 28B.1555.010 (Exhibit EU-460).

⁸²² EU FWS, para. 541.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 166

ii. *The JCATI activities are not a specific subsidy to Boeing.*

517. Even aside from the fact that the EU’s claims regarding the JCATI are not within the scope of this compliance proceeding, the EU fails to demonstrate that the JCATI activities constitute a specific subsidy to Boeing.

518. The JCATI does not confer a financial contribution. The only eligible applicants for any JCATI awards are the University of Washington, Washington State University, and other public four-year institutions of higher education as defined by RCW 28B.10.016.⁸²³ The universities and industry will work together on various projects, but industry partners will not receive any funding from the JCATI. Thus the EU is mistaken when it asserts that grants will be awarded to “16 firms.”⁸²⁴ In fact, the document underlying the EU statement refers to “16 projects.”⁸²⁵

519. Similarly, the JCATI activities confer no benefit to Boeing. The EU asserts that Boeing has been “awarded” grant money, but as explained above, JCATI funding is allocated to projects by educational institutions.⁸²⁶ The EU also claims that the JCATI will facilitate the transfer of technologies developed by the Washington State university system to Boeing, but it fails to provide any evidence to substantiate this claim.⁸²⁷ Further, the United States explained in its response to the Panel’s request for information that the JCATI has not undertaken any effort to transfer technology to the aerospace industry.⁸²⁸

520. The EU also fails to demonstrate that the JCATI activities are specific within the meaning of Article 2(a) of the SCM Agreement. The legislation creating the JCATI refers to technologies that can be used in the aerospace industry, but it does not limit industry participants to particular sectors.⁸²⁹ In fact, Exhibit USA13-147 indicates that the Italian automobile manufacturer Lamborghini is an industry partner for a JCATI project.

521. In sum, the EU fails to meet its burden of proof that JCATI is either a measure taken to comply or a specific subsidy to Boeing.

⁸²³ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 133 (Exhibit USA-198).

⁸²⁴ EU FWS, para. 527.

⁸²⁵ Exhibit USA-181 (USA13-150).

⁸²⁶ EU FWS, para. 534.

⁸²⁷ EU FWS, para. 537.

⁸²⁸ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 136 (Exhibit USA-198).

⁸²⁹ Exhibit EU-460.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 167

J. Kansas IRBs

522. The City of Wichita is applying its Industrial Revenue Bond (“IRB”) program in a manner consistent with the SCM Agreement. Boeing, moreover, no longer receives IRBs, and IRBs are no longer causing any adverse effects. The United States has both withdrawn this subsidy and taken appropriate steps to remove its adverse effects.

523. The original panel found that the state and local property and sales tax breaks granted through the issuance of IRBs by the city of Wichita constitute specific subsidies under Articles 1.1 and 2.1(c) of the SCM Agreement.⁸³⁰ The original panel found that Boeing and Spirit were granted disproportionately large amounts of the subsidy, indicating that the tax abatements are *de facto* specific.⁸³¹ In particular, the original panel found, “there is 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.”⁸³² Central to the original panel’s finding was its consideration that Boeing and Spirit received approximately 69 percent of all IRBs granted between 1979 and 2005, but accounted for only 32 percent of manufacturing employment.⁸³³

524. The Appellate Body upheld the original panel’s finding of specificity under Article 2.1(c) based on different reasoning.⁸³⁴ According to the Appellate Body, the original panel’s focus on Boeing’s share of employment within the Wichita economy was irrelevant to the analysis of whether the IRBs granted were disproportionately large.⁸³⁵ The Appellate Body upheld the finding of specificity on the basis that the United States had not provided sufficient evidence to undermine the assessment that granting 69 percent of IRBs to Boeing and Spirit was disproportionately large.⁸³⁶

525. As the United States indicated in its notification of compliance with the DSB’s recommendations and rulings,⁸³⁷ and as confirmed by the EU’s own evidence,⁸³⁸ the City of Wichita has not provided any IRBs to Boeing since 2007. Consequently, there is no basis to consider that the amount of IRBs issued to Boeing (*i.e.*, zero) is disproportionately large. Even

⁸³⁰ *US – Large Civil Aircraft (Panel)*, paras. 7.711, 7.779.

⁸³¹ *US – Large Civil Aircraft (Panel)*, para. 7.770.

⁸³² *US – Large Civil Aircraft (Panel)*, para. 7.769.

⁸³³ *US – Large Civil Aircraft (Panel)*, para. 7.769.

⁸³⁴ *US – Large Civil Aircraft (AB)*, para. 889.

⁸³⁵ *US – Large Civil Aircraft (AB)*, para. 886.

⁸³⁶ *US – Large Civil Aircraft (AB)*, paras. 888-889.

⁸³⁷ United States Notification of the Withdrawal of Subsidies and Removal of Adverse Effects, para. 10 (Sept. 23, 2012) (Exhibit USA-180).

⁸³⁸ Exhibit EU-420.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 168

considering the IRBs issued to Spirit since 2007, based on Exhibit EU-420, the amount issued to Spirit is only 12.6 percent of the total amount issued.⁸³⁹ Thus, the IRB program is no longer *de facto* specific under Article 2.1(c) and the United States has therefore withdrawn the WTO-inconsistent subsidy in accordance with the DSB’s recommendations and rulings.

526. Accordingly, the EU is incorrect to argue that the “situation remains the same.”⁸⁴⁰ In fact, the situation has changed considerably. In addition, the EU asserts Boeing has received 53 percent of the total IRB amount, but that figure is misleading because it is based on IRBs issued between 1979 and 2007.⁸⁴¹ The EU does not contest that no IRBs have been issued to Boeing since 2007. Therefore, the amount of post-2007 IRBs at issue in this compliance proceeding is zero.

K. South Carolina Measures

1. Introduction

527. Throughout the 1990s and up until today, the U.S. state of South Carolina has been providing a variety of programs to encourage and enable companies to invest in the state and, thus, to stimulate the economic development and well-being of the state at large. These programs are not targeted at any particular enterprise or industry, and they are non-discriminatory in every sense of the word. Indeed, many companies from the EU have taken part in and made use of these programs. South Carolina’s economic development measures, moreover, are not declared “measures to comply” and, in terms of their nature and effects, are different from any of the measures that are subject to the DSB’s recommendations and rulings.

528. Despite this, the EU has decided to challenge South Carolina’s economic development measures and it argues that they are within the terms of reference of this compliance proceeding. The EU’s arguments to this effect fail, as we discuss in further detail below.

2. Factual Background

529. From the 1970s to the early 1990s, South Carolina’s manufacturing base declined. As a report by the Moore School of Business (“Moore”) at the University of South Carolina explains:

After peaking at almost 230,000 jobs in 1973, the textile and apparel employment base has shrunk every year afterwards. The sector most responsible for South Carolina’s transition from an agricultural to an industrial state was no longer

⁸³⁹ Exhibit EU-420.

⁸⁴⁰ EU FWS, para. 424.

⁸⁴¹ Exhibit EU-420.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 169

viable as a source of secure employment. The future of South Carolina's manufacturing sector was uncertain.⁸⁴²

530. As a result, in the 1990's, South Carolina instituted an industrial policy of creating a favorable environment for private investors to foster economic development and job growth. Such private investors have included the Germany-based auto manufacturer BMW, the U.S. freight forwarder UPS, the France-based tire manufacturer Michelin, the Italy-based aerospace supplier Alenia Aeronautica ("Alenia") (a Finmeccanica company), the U.S.-based aerospace supplier Vought Aircraft Industries Inc. ("Vought"), the U.S.-based heavy-duty vehicle manufacturer Proterra, the Germany-based tire manufacturer Continental Tire the Americas, LLC., the Germany-based automotive supplier ZF Group, and the U.S.-based LCA manufacturer Boeing.⁸⁴³ These investment packages, while negotiated separately and containing distinct provisions, may have elements in common. For instance, they may include the provision of state grant and/or bond-funded facilities and infrastructure,⁸⁴⁴ and in some cases a lease of the project site for \$1 per year. The companies may also claim any available sales and use tax exemptions, job tax credits, and fee-in-lieu of tax (FILOT) agreements (including special source revenue credits (SSRCs)) under generally available, pre-existing statutory provisions. In exchange, the companies must commit to make an investment of a certain size and create a certain number of jobs.

531. Discrimination between U.S. and non-U.S. employers, or between aerospace and non-aerospace employers, is not part of South Carolina's industrial policy. All are welcome – and in fact, South Carolina has informed the United States that if Airbus were to commit to significant new job and investment creation in South Carolina as has Boeing, investment packages like Project Emerald and Project Gemini would be available to it as well.

⁸⁴² *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), p. 20 (Exhibit USA-154). The study was financially supported by BMW, but "the research team at the Moore School of Business independently designed the methodology and assumes full responsibility for the integrity of the results." *Ibid.*, pp. 2-3.

⁸⁴³ *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), pp. 25-28 (Exhibit USA-154); *Tire Makers' New Home: Michelin, Bridgestone, Continental Shift Tire Industry Locus to South Carolina*, Jeff Bennett, *The Wall Street Journal* (Apr. 16, 2012) (Exhibit USA-182); *State Investing Millions in Plant: Vought-Alenia Incentives Deal Gains Approval of Legislative Panel*, John P. McDermott, *The Post and Courier* (Dec. 8, 2004) (Exhibit USA-183); *Proterra Selects Greenville as New Location for Research, Development and Assembly of Advanced Battery Commercial Vehicles and Systems*, Press Release, South Carolina Department of Commerce (Feb. 4, 2010) (Exhibit USA-184); *ZF Group Announces Expansion in Laurens County*, Press Release, South Carolina Department of Commerce (Sept. 7, 2011) (Exhibit USA-185).

⁸⁴⁴ The sale of state bonds for facilities and infrastructure can be authorized by any of several different laws in different combinations. See *infra*, Section II(C)(2)(c)(iii).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 170

a. The BMW Paradigm

532. South Carolina’s 1992 investment package for BMW’s automobile manufacturing operations in Greer, upstate South Carolina, set the paradigm. The package included:

- Industrial revenue bonds, which are one of several types of bonds that South Carolina can float to fund facilities and infrastructure for large industrial projects.⁸⁴⁵
- A property tax abatement (“fee-in-lieu” of taxes, or FILOT) agreement, valued at \$70 million over 20 years.
- Labor training through the technical college system valued at \$5 million.
- A standard job creation income tax credit (\$300 to \$1,500 per new job created) valued at \$2.85 million per year for up to 15 years.
- The acquisition of a 900-acre plant site for \$36.6 million. The plant site was then leased to BMW for \$1 per year.⁸⁴⁶

533. As a result, BMW located its facility in South Carolina and it also promised to generate 1,900 direct jobs and invest almost \$300 million. Its investment is widely understood to have been the basis for South Carolina’s gradual economic development since that time.⁸⁴⁷ BMW’s investment in Upstate South Carolina, and the model it set, was so successful that Moore School of Business credited it with sparking a “manufacturing renaissance” in the state, due to BMW’s presence as well as the growth of an “automotive cluster” of BMW suppliers.⁸⁴⁸ As a result,

⁸⁴⁵ See *infra*, Section II(C)(2)(c)(iii).

⁸⁴⁶ *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), p. 25 (Exhibit USA-154).

⁸⁴⁷ *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), pp. 24-25 (Exhibit USA-154). The investment package was not the sole driver for BMW’s decision to locate in Greer – on the contrary, Moore has described the “personal attention . . . extended by” local politicians, “low unionization and labor costs in South Carolina relative to other possible sites,” and “proximity to supplier and product markets” as other important factors. *Ibid.*, pp. 23-24.

⁸⁴⁸ *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), p. 23 (Exhibit USA-154). Subsequently, in 2002, South Carolina and BMW negotiated an expansion project for the BMW site. In May 2002, the State passed the General Obligation Economic Development Bond Act, which raised the state’s debt service limit for general obligation bonds by one half of a percent to 5.5 percent of the prior years’ revenues. See *South Carolina: Beemer Bonds*, Tedra DeSue, Bond Boyer (Apr. 1, 2004) (Exhibit USA-186). South Carolina then offered BMW a further incentive package funded by state bonds totaling \$103.5 million. State Budget and Control Board Resolution No. 7, Meeting of Dec. 9, 2003 (Exhibit USA-187). As part of this package, South Carolina funded a variety of site improvements, the acquisition of a 55-acre parcel of land, a group data center, infrastructure

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 171

Upstate South Carolina is today “one of North America’s most competitive areas for manufacturing.”⁸⁴⁹ According to a 2008 economic impact study, “BMW’s South Carolina complex supports 23,050 jobs and generates \$1.2 billion in wages and salaries annually in the state (based on 2007 plant activity).”⁸⁵⁰ For 2007 alone, BMW’s “statewide value added was \$1.9 billion,” and “{t}he total economic output associated with BMW’s annual economic activities is more than \$8.8 billion in South Carolina.”⁸⁵¹

534. The BMW package was the first significant package of economic development measures, but certainly not the only package adopted and agreed upon by the State of South Carolina and its local governments. Indeed, similar packages were agreed upon for Michelin, GKN (a UK-based aerospace supplier), Bridgestone (a Japan-based tire manufacturer), Continental Tire, First Quality Tissue (a U.S.-based tissue manufacturer), Vought, and many others.⁸⁵² South Carolina’s formula reflected in the BMW investment package helped to propel its economy forward.

b. Project Emerald

535. In 2004, South Carolina designed a similar investment package (“Project Emerald”) for the U.S. aerospace supplier Vought, and the Italy-based aerospace supplier Alenia,⁸⁵³ both of which supply parts for Airbus as well as Boeing.⁸⁵⁴ Like BMW before it, Project Emerald aimed to spur South Carolina’s manufacturing renaissance creating a favorable environment for private enterprise resulting in the establishment of large-scale industrial infrastructure.

improvements to interstate highway I-85, and other facilities and infrastructure. *Ibid.* In exchange, BMW committed to invest at least \$400 million and to create at least 400 new jobs. *Ibid.*

⁸⁴⁹ *The Economic Impact of BMW on South Carolina*, Moore School of Business (May 2002), p. 23 (Exhibit USA-154).

⁸⁵⁰ *BMW in South Carolina: The Economic Impact of a Leading Sustainable Enterprise*, Douglas P. Woodward & Paulo Guimarães (Sept. 2008), p. 2. (Exhibit USA-188).

⁸⁵¹ *BMW in South Carolina: The Economic Impact of a Leading Sustainable Enterprise*, Douglas P. Woodward & Paulo Guimarães (Sept. 2008), p. 2. (Exhibit USA-188).

⁸⁵² *Michelin to grow business in Anderson, Lexington Counties*, Press Release, South Carolina Department of Commerce (Apr. 10, 2012) (Exhibit USA-189); *GKN Aerospace Announces New Facility in Orangeburg County*, Press Release, South Carolina Department of Commerce (Nov. 22, 2011) (Exhibit USA-0190); *State Investing Millions in Plant: Vought-Alenia Incentives Deal Gains Approval of Legislative Panel*, John P. McDermott, *The Post and Courier* (Dec. 8, 2004) (Exhibit USA-183).

⁸⁵³ *State Investing Millions in Plant: Vought-Alenia Incentives Deal Gains Approval of Legislative Panel*, John P. McDermott, *The Post and Courier* (Dec. 8, 2004) (Exhibit USA-183).

⁸⁵⁴ *See, e.g., Triumph Soars On Vought Acquisition*, Melanie Linder, *Forbes* (Mar. 23, 2010) (Exhibit USA-192); *Alenia Aeronautica And Airbus Signed an Industrial Cooperation Agreement for the A380 Freighter*, Press Release, EADS (Dec. 3, 2004) (Exhibit USA-193).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 172

c. Project Gemini

536. In 2009, Boeing decided to build a 787 production line in South Carolina.⁸⁵⁵ For its part, South Carolina, consistent with its efforts to provide a favorable environment for investment and job creation, structured an investment package (“Project Gemini”) for Boeing similar to those for BMW, Vought, Proterra, and many others. Boeing’s presence in South Carolina has had significant direct and indirect economic benefits for the state. Indeed, Boeing has already exceeded its initial capital investment and job projections for the North Charleston campus, reportedly employing more than 6,000 people, with an estimated impact on the region’s economy of \$4.6 billion.⁸⁵⁶ According to a report released by a think tank in May 2012, Charleston experienced the largest growth in manufacturing jobs of any U.S. metropolitan area from Q1 2010 to Q4 2011.⁸⁵⁷ South Carolina’s economic development programs, starting with the BMW project, are having their desired effect: the overall economic development and creation of real value for the State of South Carolina and its localities.

3. *The EU fails to establish that Project Emerald is within the scope of this compliance proceeding and constitutes a subsidy to Boeing under Article 1 of the SCM Agreement.*

537. On September 25, 2012, the EU submitted its consultation request in this compliance proceeding, alleging that Project Emerald and Project Gemini were WTO-inconsistent subsidies.⁸⁵⁸ This allegation took the United States by surprise. Indeed, when Boeing became involved with Project Emerald in 2008-2009 through its acquisition of Vought and Alenia’s South Carolina operations, the EU was directly notified of the transaction and approved it.⁸⁵⁹ Yet the EU remained silent on the WTO-consistency of the South Carolina-related measures until its consultation request in this dispute, after Boeing had already acquired Vought and Alenia’s interests in South Carolina, after South Carolina later made a similar investment with Boeing under Project Gemini, and after the United States had already spent six months bringing itself into compliance with the recommendations and rulings of the DSB in this dispute.

538. Project Emerald is outside the terms of reference of this compliance proceeding, as it dates from 2004 and has no close nexus with the DSB’s recommendations and rulings in the

⁸⁵⁵ This was Boeing’s second 787 production line. The first is in Washington State.

⁸⁵⁶ See *Dream Comes True – Again – in South Carolina*, Site Selection (May 2013) (Exhibit USA-200).

⁸⁵⁷ *Locating American Manufacturing: Trends in the Geography of Production*, Susan Helper, Timothy Krueger and Howard Wial, Metropolitan Policy Program at Brookings (Exhibit USA-201).

⁸⁵⁸ *Request for Consultations by the European Union*, WT/DS353/16 (Oct. 2, 2012) (Exhibit USA-202).

⁸⁵⁹ See Commission of the European Communities, Merger Procedure, Case No. COMP/M.5151 – Boeing / Alenia NA / JV (June 3, 2008) (Exhibit USA-203).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 173

original panel proceeding. Moreover, Project Emerald and its constitutive parts are not subsidies within the meaning of Article 1 because they do not confer a benefit on Boeing.

- a. *The EU fails to establish that Project Emerald is within the terms of reference of this dispute.*
 - i. *Project Emerald is not a measure taken to comply because it pre-dates the original panel proceeding.*

539. As mentioned above, the EU acknowledges that elements of Project Emerald date to 2004.⁸⁶⁰ Boeing did not receive anything under Project Emerald at that time. Nevertheless, to the extent that the EU challenges those elements as they related to Boeing in 2004, the EU could have challenged them in the original dispute, but opted not to. Therefore, these elements of Project Emerald are not within the Panel's terms of reference.⁸⁶¹

- ii. *The EU has failed to establish that Project Emerald has a close nexus with the recommendations and rulings of the DSB.*

540. Project Emerald does not satisfy the close nexus test set out by the Appellate Body, which involves an examination of the nature, effects, and timing of an alleged undeclared measure taken to comply.⁸⁶² Applying this test requires careful consideration of the key elements of the measures at issue, which the EU lists as:

- The provision of a FILOT agreement, which allows South Carolina taxpayers to pay property taxes through fees rather than the higher, constitutionally mandated 10.5 percent rate;
- A ground sublease agreement, which leased land to Vought and Global Aeronautica, but provided that the improvements to the land would revert to the State at the end of the lease;
- The temporary provision of facilities and infrastructure funded through state bonds; and
- The provision of corporate income tax credits that are proportional to the number of new jobs created through Project Emerald.⁸⁶³

⁸⁶⁰ See, e.g., EU FWS, para. 698 (indicating that the Project Emerald bond resolution dates to December 14, 2004).

⁸⁶¹ *US – Upland Cotton (21.5) (AB)*, para. 211 (“A complaining Member ordinarily would not be allowed to raise claims in an Article 21.5 proceeding that it could have pursued in the original proceedings, but did not.”).

⁸⁶² *US – Zeroing (21.5 – EC) (AB)*, para. 204.

⁸⁶³ See *EU Request for the Establishment of a Panel* (Oct. 12, 2012), WT/DS353/18, para. 24 (Exhibit USA-205).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 174

541. In terms of nature, these elements do not resemble those covered by the DSB’s recommendations and rulings. Indeed, some – such as the jobs tax credits – deal with state corporate income taxes, which were not at all the subject of the DSB recommendations and rulings. Furthermore, the granting authority for Project Emerald is separate and independent from the granting authority for all of the original measures. Even the companies involved in Project Emerald are different: the package was designed for Boeing suppliers, not for Boeing itself. The EU does not indicate how the project site lease, the fee agreement, the provision of facilities and infrastructure, or the jobs tax credits resemble the measures covered by the DSB’s recommendations and rulings.

542. The EU also fails to establish a close nexus in terms of *effects* between Project Emerald and any measure covered by the DSB’s recommendations and rulings. The EU claims that the “South Carolina measures . . . are effectively substitutes for the Washington subsidies.”⁸⁶⁴ But the EU’s reference to “Washington subsidies” refers to speculative and hypothetical subsidies, not the only Washington measures subject to the DSB’s recommendations and rulings. The EU speculates that, if South Carolina had not incentivized Boeing to locate its new 787 production line there, then that production line would have been located in Washington and would have received unspecified and undefined subsidies.⁸⁶⁵ The EU’s focus on hypothetical, additional subsidies says nothing about the effects of the measure subject to the DSB’s recommendations and rulings and is therefore insufficient to demonstrate a close nexus in terms of effects between those measures and the South Carolina measures.

543. The EU alleges in a one-sentence argument that Project Emerald is “closely connected with” the Wichita IRB measure, because both measures are directed towards “LCA-component manufacturing facilities and consist primarily of property tax breaks related to such facilities.”⁸⁶⁶ However, the element of Project Emerald that the EU alleges is the largest (in terms of benefit) – *i.e.*, the provision of facilities and infrastructure⁸⁶⁷ – is not a “tax break.” The EU also fails to demonstrate a close nexus in terms of effects between Project Emerald and the Wichita IRBs because Project Emerald does not confer a subsidy to Boeing.

544. Moreover, the EU fails to articulate how the Project Emerald Fee Agreement, the project site lease, the provision of facilities and infrastructure, or the provision of income tax credits for job creation bear a close nexus in terms of nature to a property and sales tax abatement provided through the issuance of IRBs. The fact that these are different types of policy tools used by different granting authorities at different times in non-overlapping geographical areas – and

⁸⁶⁴ EU FWS, para. 735.

⁸⁶⁵ This is the same argument the EU asserted in its response to the U.S. Preliminary Ruling Request. The EU’s addition of footnote 1607, which refers to the Washington B&O tax rate reduction, plus “the new subsidies that Washington surely would have provided Boeing” does nothing to change the speculative nature of the EU’s claim.

⁸⁶⁶ EU FWS, para. 735.

⁸⁶⁷ Exhibit EU-39.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 175

indeed, for manufacturing operations related to different LCA components – confirms that the EU’s broad-brush comparison is too simplistic.

545. Because the EU failed to demonstrate a close nexus, the EU has failed to establish a *prima facie* case with respect to the South Carolina measures.

- b. *The EU fails to establish that Project Emerald confers a subsidy to Boeing.*
 - i. *The EU has not demonstrated that any alleged benefits to Vought and/or GA passed through to Boeing – and in fact, the evidence confirms that they have not.*

546. As the EU acknowledges, Project Emerald was an investment package for Vought and GA, a joint venture between Vought and Italy-based Alenia. Therefore, to establish a *prima facie* case, the EU must demonstrate that any alleged benefit passed through to Boeing. However, the EU fails to do so⁸⁶⁸ – and in fact, any benefit to Vought and Alenia under Project Emerald could not possibly have passed through to Boeing, because Boeing acquired 100 percent of Vought’s South Carolina operations (“Vought SC”) and GA in 2008 and 2009 through arm’s length transactions and for fair market value.

547. In *EC – Large Civil Aircraft*, the Appellate Body found that the benefit in a private-to-private transaction would not necessarily pass through from the seller to the buyer. To determine whether such a benefit “pass-through” failed to occur, the Appellate Body stated that:

“a fact-intensive inquiry into the circumstances surrounding the changes in ownership would be required,” based on:

- (1) “the extent to which there are sales at fair market and”
- (2) “at arm’s length,” and
- (3) “accompanied by transfers of ownership and control.”⁸⁶⁹

In this case, the EU has not performed such an analysis with respect to any of these factors. In fact, the sale of Vought SC and GA satisfies all of them, which means that any prior subsidies did not pass through to Boeing.

⁸⁶⁸ Indeed, the EU imputes zero benefit to Boeing under Project Emerald prior to 2010. *See* Exhibit EU-39.

⁸⁶⁹ *EC – Large Civil Aircraft (AB)*, para. 725.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 176

(a) Boeing's acquisitions were for fair market value.

548. Boeing paid more than \$1 billion to acquire Vought SC.⁸⁷⁰ Boeing also purchased Vought's and Alenia's stakes in GA.⁸⁷¹ Collectively, these prices reflected the fair market value of the assets and entities being purchased. The EU has not offered any evidence to the contrary.

(b) Boeing's acquisitions were at arm's length.

549. Boeing's acquisitions of Vought SC and GA were at arm's length. Neither Vought SC, nor GA, nor GA's partial parent, Alenia NA, was a corporate affiliate of Boeing's.⁸⁷² Nor were Vought SC, GA, or Alenia NA major or controlling shareholders of Boeing. In fact, Boeing negotiated with Vought for several months, and with Alenia for nearly a year.⁸⁷³ The EU has not provided any evidence that these sales were not at arm's length.

(c) Boeing's acquisitions resulted in the complete transfer of ownership and control over both Vought South Carolina and GA, with no ongoing controlling interest by either of the respective sellers.

550. Through its purchases of Vought SC and GA, Boeing acquired complete ownership and control over the North Charleston operations that operated Boeing 787 fuselage fabrication and assembly operations in North Charleston. Indeed, following these transactions, neither Vought, nor Alenia NA, retained any financial or controlling role in the North Charleston operations.

551. In particular, Boeing acquired a 100 percent interest in GA, and it also acquired Vought SC, which had operated as a separate unit of Vought. As Vought described at the time, its sale to Boeing was of its "entire equity interest in Global Aeronautica."⁸⁷⁴ In other words, neither Vought nor Alenia NA retained *any* interest whatsoever, including any ownership or control, in GA following their respective sales to Boeing.

552. The same is true with respect to Vought SC. Vought "discontinued" its North Charleston operations, selling all of the assets and operations of its 787 business there to Boeing.⁸⁷⁵ This included a period of "transition services" provided to Boeing, which were unrelated to the production operations at North Charleston and, in any case, temporary for a period of a little over one year following the sale.⁸⁷⁶ Thus, through its acquisition of Vought SC, Boeing took full

⁸⁷⁰ 2009 Annual Report, Boeing, p. 67 (Exhibit USA-265).

⁸⁷¹ *Backgrounder, Boeing South Carolina*, Boeing (Aug. 2011) (Exhibit EU-463).

⁸⁷² *Boeing 10-K for fiscal year ending December 31, 2008*, Exhibit 21 (Exhibit USA-223).

⁸⁷³ *See Alenia Is Going To Make The Pentagon's Planes Fly Singlehanded*, Andrea Nativi, Report by Italian Defense Review (June 20, 2008) (Exhibit USA-238) (noting that as early as June 2008, Alenia had rejected Boeing's offer to purchase its shares in GA).

⁸⁷⁴ *Vought 10-Q for Quarter End June 29, 2008* (Exhibit USA-208).

⁸⁷⁵ *Vought 10-Q for Fiscal Year Ended December 31, 2009* (Exhibit USA-266).

⁸⁷⁶ *Vought 10-Q for Fiscal Year Ended December 31, 2009* (Exhibit USA-266).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 177

control over the assembly and installation of the aft fuselage sections that Vought SC had performed in North Charleston.⁸⁷⁷

c. The EU fails to establish that any of the elements of Project Emerald confers a benefit to Boeing.

553. As discussed above, Boeing paid fair market value for Vought and GA's interests in South Carolina, and consequently any benefit conferred by Project Emerald prior to Boeing's acquisition did not pass through to Boeing. The EU fails to establish that any of the individual measures that the EU associates with Project Emerald confers a benefit to Boeing.⁸⁷⁸

i. Project Site Lease

554. Since Boeing's assumption of the land-lease, Boeing has spent more on remediating the land for the project site than the land itself was worth. Indeed, the State benefited from Boeing's presence on, and tremendous improvement of, land that had previously been unoccupied, and which had been unmarketable for years.

555. The project site lease was for a parcel of land on a former phosphate mine that reportedly had a consistency similar to pudding.⁸⁷⁹ [BCI].⁸⁸⁰ And [BCI], determined that the value of the 240-acre parcel at issue in the project site lease was [BCI], in light of the land's poor condition.⁸⁸¹

556. Moreover, [BCI].⁸⁸² Under U.S. law at the time of the project site lease, airport land (at airports that receive federal assistance) that is used for non-aeronautical purposes, such as manufacturing operations, must be leased at market rates.⁸⁸³ [BCI ⁸⁸⁴]⁸⁸⁵ Thus, the poor condition of the land, [BCI], all confirm that the project site had no or virtually no value.

⁸⁷⁷ *Boeing Buys a Vought Aircraft Plant*, Joseph Weber, Bloomberg BusinessWeek (July 7, 2009) (Exhibit USA-195)

⁸⁷⁸ In addition, considered collectively, Project Emerald does not confer a benefit to Boeing, nor has the EU attempted to show that it does. Moreover, to the extent any general infrastructure is included in the benefit the EU alleges has been conferred, this should be excluded because any provision of general infrastructure is exempt from the definition of a subsidy under the SCM Agreement. See Article 1.1(a)(1)(iii).

⁸⁷⁹ *Boeing 787 Project Flies High Over Industrial*, ENRSoutheast (Nov. 5, 2012) (Exhibit USA-213).

⁸⁸⁰ *Letter from [BCI]* (Aug. 9, 2005) (Exhibit USA-214(BCI)) (USA13-289).

⁸⁸¹ *Letter from [BCI]* (Exhibit USA-214(BCI)) (USA13-289).

⁸⁸² *Letter from [BCI]* (Exhibit USA-214(BCI)) (USA13-289).

⁸⁸³ *Policy and Procedures Concerning The Use Of Airport Revenue; Policy Statement, Federal Aviation Administration*, 64 Fed. Reg. 7696, 7721 (Feb. 16, 1999), Section VII(C) (Exhibit USA-215).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 178

557. The EU’s valuation of the 240-acre project site at \$150.03 million (approximately \$625,125 per acre) is fanciful.⁸⁸⁶ Indeed, under this valuation, the land would be worth more than four times any other industrial land sold in Charleston County in recent years. Moreover, as discussed above, the true value of the land sublease was virtually nothing – and to Boeing, [BCI].

ii. Project Emerald Fee Agreement

558. The Project Emerald Fee Agreement does not involve either a financial contribution or a benefit to Boeing or any other party.

(a) Background on FILOT Agreements

559. The South Carolina state constitution mandates an *ad valorem* industrial assessment rate of 10.5 percent, which is procedurally difficult to change.⁸⁸⁷ As the EU’s evidence explains:

Without a FILOT, industrial property is assessed at 10.5% {*ad valorem*} in South Carolina The 10.5% assessment on industrial property puts South Carolina at an extreme disadvantage to our neighboring states.⁸⁸⁸

560. FILOT Agreements generally reduce the applicable assessment rate from 10.5 percent to 6 percent on both real and personal property.⁸⁸⁹ Furthermore, South Carolina statute allows for “super fee” or “enhanced” FILOT agreements for companies that invest \$150 million and create 125 jobs, or invest \$400 million (regardless of job creation). Such super fee agreements reduce the assessment rate to as low as 4 percent.⁸⁹⁰ In addition, nearly all FILOT Agreements are accompanied by Special Source Revenue Credits (“SSRCs”), which rebate a portion of the fee in lieu of tax due under the FILOT Agreement and thereby further reduce the assessment rate. For example, during 2012, South Carolina concluded 64 projects with investments of \$10 million or greater. All of these 64 projects were offered a FILOT agreement by the local government, and 91 percent were offered SSRCs.

561. As these figures show, South Carolina provides FILOT agreements widely. According to the State of South Carolina, the amount of manufacturing property subject to fee in lieu of taxes (\$37,434,794,785) exceeds the amount of such property subject to standard *ad valorem* property

⁸⁸⁴ Letter from [BCI] (Exhibit USA-214) (Exhibit USA13-289).

⁸⁸⁵ Letter from [BCI] (Exhibit USA-214) (Exhibit USA13-289).

⁸⁸⁶ See EU FWS, paras. 558-559.

⁸⁸⁷ *South Carolina Constitution*, Art. X, § 1 (Exhibit USA-0217).

⁸⁸⁸ *The Economic Impact of Boeing in South Carolina*, Alliance for South Carolina’s Future, May 2010, p. 3 (Exhibit EU-489).

⁸⁸⁹ S.C. Code § 12-44-30(7)(a)-(b) (Exhibit EU-539).

⁸⁹⁰ S.C. Code § 12-44-30(7)(a)-(b) (Exhibit EU-539).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 179

taxes (\$28,575,847,264) statewide. The same is true for Charleston County: \$2,219,127,562 is subject to a FILOT agreement while \$843,916,760 is subject to *ad valorem* property taxes. The types of properties that are subject to FILOT agreements include shopping malls, electricity generating facilities, call center locations, manufacturers, and other industrial taxpayers.⁸⁹¹

562. Accordingly, for companies which qualify for a FILOT Agreement and have exceeded the \$150 million/125 job threshold, the generally applicable assessment rate is less than 4 percent: they have a 4 percent assessment rate under the FILOT, which is multiplied by the applicable millage rate to the “fee in lieu of” amount, when is then reduced further with the SSRC.

(b) The Project Emerald Fee Agreement does not confer a financial contribution.

563. The EU asserts that the Project Emerald Fee Agreement is a financial contribution because it represents the foregoing of revenue otherwise due.⁸⁹² However, this is incorrect. The Project Emerald Fee Agreement does not involve the foregoing or failure to collect “revenue foregone that is otherwise due.”⁸⁹³ The Appellate Body has stated:

The identification of circumstances in which government revenue that is otherwise due is foregone requires a comparison between the tax treatment that applies to the alleged subsidy recipients and the tax treatment of comparable income of comparably situated taxpayers. Accordingly, a panel examining a claim under Article 1.1(a)(1)(ii) of the *SCM Agreement* should first identify the tax treatment that applies to the income of the alleged recipients. . . . As a second step, the panel should identify a benchmark for comparison – that is, the tax treatment of comparable income of comparably situated taxpayers. . . . Finally, as a third step, the panel should compare the reasons for the challenged tax treatment with the benchmark tax treatment it has identified after scrutinizing a Member’s tax regime. Such a comparison will enable a panel to determine whether, in the light of the treatment of the comparable income of comparably situated taxpayers, the government is foregoing revenue that is otherwise due in relation to the income of alleged recipients.⁸⁹⁴

564. The Appellate Body went on to caution against applying this three-step analysis in a manner that leads to the conclusion that any reduction in tax rates is foregone revenue that is otherwise due:

⁸⁹¹ See generally, e.g., *Property Tax: Statewide Economic Growth and Taxation Issues in South Carolina*, South Carolina Department of Commerce (2010) (Exhibit USA-218).

⁸⁹² EU FWS, para. 726.

⁸⁹³ Article 1.1(a)(1)(ii) SCM.

⁸⁹⁴ *US – Large Civil Aircraft (AB)*, paras. 812-814.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 180

{A}n approach that focuses too narrowly on the change effected by a tax measure could result in a finding that government revenue otherwise due has been foregone anytime the tax rate applicable to a recipient is lowered. This underscores the risk in identifying a benchmark solely by reference to historical rates, the very departure from which may reflect evidence of shifting norms within that regime. Moreover, we note that a domestic tax system may be so replete with exceptions that the rate applicable to the general category of income in fact no longer represents the “general rule” but, rather, the “exception”. The Appellate Body identified a similar concern in *US – FSC* when it expressed misgivings that a “but for” test could lead to circumvention “by designing a tax regime under which there would be no general rule that applied formally to the revenues in question, absent the contested measures”. For these reasons, while there may be circumstances in which scrutiny of a tax regime indicates the presence of a general rule and an exception, we would expect that such an indication will not ordinarily end the analysis. Rather, we would expect a panel to further examine the structure of the domestic tax regime and its organizing principles.⁸⁹⁵

565. Therefore, merely reducing tax rates does not necessarily involve foregoing revenue that is otherwise due – a consideration that the EU ignores in its discussion of the Project Emerald Fee Agreement.⁸⁹⁶ Rather, in the context of a Member’s tax regime and its organizing principles, it may be that a notional general tax rate does not constitute the appropriate benchmark.

566. Indeed, this is the case for the Project Emerald Fee Agreement. In South Carolina, taxpayers “similarly situated” to the Project Emerald site (*i.e.*, companies that are eligible for FILOT agreements because they invest over \$150 million and create 125 jobs, or invest \$400 million) are generally assessed pursuant at a rate of less than 4 percent through FILOT agreements coupled with SSRCS. Under the FILOT agreement and the SSRCS available to Project Emerald, at the applicable assessment rate is 3 percent.⁸⁹⁷ Such a reduced assessment rate is not out of the norm for projects investing in South Carolina. Therefore, the Project Emerald Fee Agreement does not confer a financial contribution to Boeing.

567. The EU argues in the alternative that the Project Emerald Fee Agreement is a “direct transfer of funds” within the meaning of Article 1.1(a)(1)(i) of the SCM Agreement. This is incorrect. The Project Emerald Fee Agreement and SSRCS do not entail payments or any other funds flowing from the State of South Carolina to Boeing. Rather, a Fee Agreement obligates the taxpayer to transfer funds to the State of South Carolina as property taxes. Indeed, the EU’s argument to the contrary implies that any tax refund or credit would constitute a financial

⁸⁹⁵ *US – Large Civil Aircraft (AB)*, para. 815.

⁸⁹⁶ See EU FWS, para. 726.

⁸⁹⁷ See EU FWS, para. 722.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 181

contribution.⁸⁹⁸ However, the simple fact of adjusting tax payments to reflect the correct tax rate is not a “direct transfer of funds” to the taxpayer any more than a refund of an overpayment for goods would be. Consequently, the Project Emerald Fee Agreement does not provide a financial contribution within the meaning of Article 1.1 of the SCM Agreement.

iii. Provision of facilities and infrastructure through state-funded bonds

568. The EU argues that the State of South Carolina “provides Boeing with customized facilities and infrastructure” through Project Emerald.⁸⁹⁹ The EU has not demonstrated that the State provides any facilities or infrastructure under Project Emerald to Boeing, since Boeing purchased the right to use the facilities and infrastructure from Vought and GA at arm’s length for fair market value.

569. Indeed, all or nearly all of the Project Emerald bond proceeds had been spent before Boeing’s acquisition of Vought SC.⁹⁰⁰ Therefore, to the extent that the proceeds of state bonds associated with Project Emerald conferred any benefit at all, they did so before the acquisition, to parties other than Boeing.

570. Furthermore, the EU’s benefit calculation addresses the wrong issue: the cost to Boeing to raise an amount of money equal to what the State of South Carolina raised through state bonds.⁹⁰¹ However, the relevant question for the EU’s argument is how much more Boeing would pay to rent the facilities and infrastructure in question (other than general infrastructure)⁹⁰² if South Carolina were a market actor. Such a calculation would have to account, *inter alia*, for the fact that the facilities and infrastructure eventually revert to South Carolina when the lease ends.⁹⁰³ The EU neglects to address such issues⁹⁰⁴ – and therefore, the EU fails to establish a

⁸⁹⁸ See EU FWS, para. 727.

⁸⁹⁹ EU FWS, para. 697.

⁹⁰⁰ See Exhibit EU-039, p. 7; *Project Emerald Reimbursement Documents* (Exhibit USA-247(BCI)) (USA13-288).

⁹⁰¹ Exhibit EU-39, p. 7. The EU discounts amounts in 2006 to 2009, apparently because that was “prior to Boeing’s assumption of Ground Sublease.” *Ibid.*, note 5. However, by the logic of this approach, the EU should discount all or nearly all of the value of the Project Emerald bonds, because the proceeds from the bonds were spent prior to 2010. See *Project Emerald Reimbursement Documents* (Exhibit USA-247(BCI)) (USA13-288).

⁹⁰² To the extent any general infrastructure is included in the benefit the EU alleges has been conferred, this should be excluded because any provision of general infrastructure is exempt from the definition of a subsidy under the SCM Agreement. See Article 1.1(a) (a)(i)(iii) SCM.

⁹⁰³ EU FWS, para. 575.

⁹⁰⁴ The EU’s calculations are inaccurate in other ways as well. For example, the EU uses a depreciation method that it describes as “150% Declining Balance (Adjusted),” which it does not attempt to justify. Exhibit EU-39, pp. 2, 7. The EU also assumes an average useful life of 25 years, which it

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 182

prima facie case that the provision of facilities and infrastructure in relation to Project Emerald confers a benefit to Boeing.

iv. MCIP Jobs Tax Credits

571. South Carolina provides corporate income tax credits for new full-time jobs created in the state. South Carolina also provides an additional income tax credit for new full-time jobs created within a multi-county industrial park (MCIP). The South Carolina Income Tax Act, Section 12-6-3360(e)(1), provides:

Taxpayers which qualify for the job tax credit provided in subsection (C) and which are located in a business or industrial park jointly established and developed by a group of counties pursuant to Section 13 of Article VIII of the Constitution of this State are allowed an additional one thousand dollar credit for each new full time job created. This additional credit is permitted for five years beginning in the taxable year following the creation of the job.⁹⁰⁵

572. On September 1, 1995, Charleston County and Colleton County entered into an Agreement for Development of a Joint County Industrial Park “in order to promote the economic welfare of the citizens of the Counties by providing employment and other benefits to the citizens of the counties.”⁹⁰⁶ Since its adoption, the original agreement has been amended at various points to either add or remove industrial park property. On February 2, 2010, the Charleston County Council adopted Ordinance 1626, which amended the park to add a parcel of land “owned by the Charleston County Aviation Authority and leased to The Boeing Company.”⁹⁰⁷

573. By virtue of the inclusion of the Boeing facility within the MCIP, Boeing is eligible to receive the additional income tax credit for new-full time jobs created within the MCIP. In response to the Panel’s request to “indicate the annual value to Boeing of the additional \$1,000-per-job portion of a new job tax credit for locating within a multi-county industrial park”, the United States indicated the following:

acknowledges is shorter than the actual useful life of the facilities and infrastructure in question. EU FWS, notes 1358, 1571. The EU also fails to account for the tax effects of depreciation.

⁹⁰⁵ S.C. Code § 12-6-3360(e)(1) (Exhibit EU-509). Section 13 of Article VIII of the South Carolina Constitution, provides that: “Counties may jointly develop an industrial or business park with other counties within the geographical boundaries of one or more of the member counties.”

⁹⁰⁶ *Ordinance 1626* (Charleston County), (Exhibit EU-516). (title: “An ordinance to further amend the agreement for development of a joint county industrial park, by and between the Charleston County, South Carolina and Colleton County, South Carolina, providing for the development of a jointly owned and operated industrial/business park, so as to include additional property in Charleston County as part of the joint county industrial park.”).

⁹⁰⁷ *Ordinance 1626* (Charleston County), (Exhibit EU-516)

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 183

The annual value of such tax credits for jobs generated by Boeing (*i.e.*, exclusive of subsidiaries) is as follows [BCI].⁹⁰⁸

The United States also provided all TC-4, “New Jobs Credit” forms submitted by Boeing.⁹⁰⁹

574. The EU estimates that the value of the additional MCIP jobs tax credit for Project Emerald is \$7.7 million between 2011 and 2016. However, the EU also asserts that as a result of the use of the special allocation and apportionment agreement, Boeing will have South Carolina taxable income of zero and no income tax liability in South Carolina. Since the additional MCIP jobs tax credits are nonrefundable, may not be sold or transferred, and may only be used to offset South Carolina income tax, the EU’s own arguments imply that the actual value of this measure to Boeing is zero. Thus, the EU fails to establish a *prima facie* case that the MCIP tax credits confer a financial contribution or a benefit.

4. *The EU has failed to establish that Project Gemini is within the terms of reference of the Panel or confers a subsidy to Boeing within the meaning of Article 1 of the SCM Agreement.*

575. As discussed above, Project Gemini is outside the terms of reference of the Panel, as it was not the subject of the DSB recommendations and rulings and is not a measure taken to comply, including because it has no close nexus with the measures that were the subject of the DSB recommendations and rulings. Project Gemini is also not a subsidy within the meaning of Article 1 of the SCM Agreement.

a. The EU fails to establish that Project Gemini is within the terms of reference of this dispute.

576. In the original panel proceeding, the DSB did not make recommendations and rulings with respect to any measure of South Carolina. Furthermore, Project Gemini is not a measure taken to comply – it is not a declared measure taken to comply nor does it satisfy the close nexus test set out by the Appellate Body, which involves an examination of the nature, effects, and timing of an alleged undeclared measure taken to comply.⁹¹⁰ Applying this test requires careful consideration of the key elements of the measures at issue, which the EU lists as:

- Long-term lease of government-owned land;
- Provision of facilities and infrastructure funded through state general obligation bonds;

⁹⁰⁸ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 158 (Exhibit USA-198).

⁹⁰⁹ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 160 (Exhibit USA-198).

⁹¹⁰ *US – Zeroing (21.5) (AB)*, para. 204.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 184

- Exemptions from South Carolina sales and use taxes;
- Agreement with the State of South Carolina for apportioning corporate income;
- Provision of corporate income tax credits for the creation of new jobs;
- Property tax exemption for large cargo freighters (LCFs);
- Establishment of a workforce recruitment, training, and development program for Boeing; and
- FILOT agreement.⁹¹¹

577. In terms of nature, these elements do not resemble those covered by the DSB's recommendations and rulings. For example, the allocation and apportionment agreement has to do with sourcing and apportionment of corporate income taxes, whereas the B&O tax of the State of Washington that was the subject of the DSB's recommendation and rulings is not a corporate income tax (indeed, the State of Washington does not impose corporate income taxes). The value of MCIP jobs tax credits increases with the number of jobs created, whereas the B&O tax rate reduction does not have this characteristic. Furthermore, the granting authority for the South Carolina measures is different from, and independent of, any of the granting authorities responsible for the measures at issue in the original panel proceeding. The EU has not articulated how any of the Project Gemini measures, either in isolation or collectively, resembles those covered by the DSB's recommendations and rulings. Therefore, no nexus in terms of nature exists.

578. In terms of effects, Project Gemini is not closely related to the measures subject to the DSB's recommendations and rulings. As discussed above, the EU claims that the South Carolina measures are substitutes for hypothetical subsidies that Washington State would have provided to Boeing. The EU's focus on hypothetical, additional subsidies says nothing about the effects of the measure subject to the DSB's recommendations and rulings and is therefore insufficient to demonstrate a close nexus in terms of effects between those measures and the South Carolina measures.

579. There is no nexus in terms of timing because Project Gemini began after the original proceedings were initiated, but before the DSB recommendations and rulings were adopted.⁹¹² Thus, Project Gemini is not a measure taken to comply with the DSB's recommendations and rulings and, therefore, is not properly within the Panel's terms of reference.

⁹¹¹ *EU Request for the Establishment of a Panel* (Oct. 12, 2012), WT/DS353/18, para. 24 (Exhibit USA-205).

⁹¹² *US – Zeroing (21.5 – EC) (AB)*, para. 224 (“{W}e agree with the European Communities and the United States that the *timing* of a measure cannot be determinative of whether it bears a sufficiently close nexus with a Member's implementation of the recommendations and rulings of the DSB so as to fall within the scope of an Article 21.5 proceeding.”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 185

580. The EU “competition between states”⁹¹³ theory for including South Carolina’s measures is inconsistent with its other claims. The EU argues that “the South Carolina subsidies are effectively *substitutes* for the Washington subsidies.”⁹¹⁴ The EU does not attempt to explain how this argument is consistent with its separate allegation that the United States has not yet withdrawn the Washington subsidies that were at issue in the original panel proceeding. In any event, the EU fails to articulate the conditions under which one measure “substitutes” for another, such that it should be considered within the terms of reference of a compliance panel even though it is not a declared measure taken to comply, and is not a measure at issue in the original proceedings.⁹¹⁵ The EU’s legal position boils down to a position that it claims to disavow: that any subsidy to Boeing would be a “measure taken to comply” for purposes of this dispute.⁹¹⁶ The EU’s own discomfort with this overbroad interpretation confirms that it has not applied the close nexus test to Project Gemini in a credible manner.

*b. The EU fails to establish that Project Gemini confers a benefit to Boeing.*⁹¹⁷

i. Project Site Lease

581. The EU challenges the same project site lease as a measure included under Project Gemini and Project Emerald. As discussed above, the project site lease conferred nothing of value to Boeing.⁹¹⁸ Therefore, there is no financial contribution and no benefit to Boeing.

ii. Project Gemini Fee Agreement

582. As discussed above in relation to the Project Emerald Fee Agreement, FILOT agreements are the rule rather than the exception for the property taxation of similarly situated industrial taxpayers in South Carolina. Consequently, there is no basis to find that the Project Gemini Fee Agreement confers a financial contribution or a benefit to Boeing.

⁹¹³ EU FWS, para. 735.

⁹¹⁴ EU FWS, para. 735.

⁹¹⁵ The EU disavows the view “that the identity of the recipient turns all Boeing subsidies into measures taken to comply.” EU FWS, para. 735. However, the EU fails to indicate how its actual view is different.

⁹¹⁶ See EU FWS, para. 735 (“Contrary to the US’ assertion, the European Union is *clearly not suggesting* that the identity of the recipient turns all Boeing subsidies into measures taken to comply.”).

⁹¹⁷ In addition, considered collectively, Project Gemini does not confer a benefit to Boeing, nor has the EU attempted to show that it does. Moreover, to the extent any general infrastructure is included in the benefit the EU alleges has been conferred, this should be excluded because any provision of general infrastructure is exempt from the definition of a subsidy under the SCM Agreement. See Article 1.1(a)(1)(iii).

⁹¹⁸ See *infra*, Section K(3)(c)(i).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 186

iii. Provision of facilities and infrastructure through state-funded bonds

583. The EU argues that the State of South Carolina “provides Boeing with tailor-made facilities and infrastructure” through Project Gemini.⁹¹⁹ However, as with its parallel argument for Project Emerald, the EU’s benefit calculation addresses the wrong issue: the cost to Boeing to raise an amount of money equal to what the State of South Carolina raised through state bonds.⁹²⁰

584. The relevant question for the EU’s argument is how much more Boeing would pay to rent the facilities and infrastructure in question (other than general infrastructure)⁹²¹ if South Carolina were a market actor. Such a calculation would have to account, *inter alia*, for the fact that the facilities and infrastructure eventually revert to South Carolina when the lease ends.⁹²² The EU neglects to address such issues⁹²³ – and therefore, the EU fails to establish a *prima facie* case that the provision of facilities and infrastructure in relation to Project Gemini confers a benefit to Boeing.

iv. Sales & Use Tax Exemptions

585. South Carolina imposes a six percent sales tax on the gross proceeds of sales by persons engaged in South Carolina in the business of selling tangible personal property at retail.⁹²⁴ South Carolina also imposes a six percent “use tax” on the sale price of tangible personal property purchased at retail for storage, use, or other consumption in South Carolina.⁹²⁵ However, the South Carolina Tax Code provides a wide variety of exemptions to these taxes, encompassing everything from manufacturing activity to sweet grass baskets.⁹²⁶ The EU contests three such exemptions relating to: (1) aircraft fuel; (2) computer equipment; and (3) construction materials.

⁹¹⁹ EU FWS, para. 567.

⁹²⁰ Exhibit EU-39, p. 7.

⁹²¹ To the extent any general infrastructure is included in the benefit the EU alleges has been conferred, this should be excluded because any provision of general infrastructure is exempt from the definition of a subsidy under the SCM Agreement. *See* Article 1.1(a) (a)(i)(iii) SCM.

⁹²² EU FWS, para. 575.

⁹²³ The EU’s calculations are inaccurate in other ways as well. For example, the EU uses a depreciation method that it describes as “150% Declining Balance (Adjusted),” which it does not attempt to justify. Exhibit EU-39, pp. 2, 7. The EU also assumes an average useful life of 25 years, which it acknowledges is shorter than the actual useful life of the facilities and infrastructure in question. EU FWS, notes 1358, 1571. The EU also fails to account for the tax effects of depreciation.

⁹²⁴ S.C. Code §§ 12-36-910(A), 12-36-1110 (EU-493).

⁹²⁵ S.C. Code §§ 12-36-1310(A), 12-36-1110 (EU-493).

⁹²⁶ *See generally* S.C. Code §§ 12-36-2120(1)-(80) (EU-493).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 187

The EU overstates any financial contribution and benefit provided by these exemptions and fails to demonstrate that they are specific.

(a) The sales and use tax exemptions do not confer a financial contribution.

586. The EU alleges the existence of a financial contribution under Article 1.1(a)(1)(ii), but it has failed to demonstrate that the sales and use tax exemptions result in the foregoing of government revenue that is otherwise due. Therefore, it has failed to meet its burden of proof.

587. The Appellate Body has explained that the analysis of whether a financial contribution exists under Article 1.1(a)(1)(ii) requires “a comparison between the tax treatment that applies to the alleged subsidy recipients and the tax treatment of comparable income of comparably situated taxpayers.”⁹²⁷ The Appellate Body described a three-step approach for this comparison:

{A} panel examining a claim under Article 1.1(a)(1)(ii) of the SCM Agreement should first identify the tax treatment that applies to the income of the alleged recipients. Identifying such tax treatment will entail consideration of the objective reasons behind the treatment and, where it involves a change in a Member’s tax rules, an assessment of the reasons underlying that change.⁹²⁸

...

As a second step, the panel should identify a benchmark for comparison – that is, the tax treatment of comparable income of comparably situated taxpayers.⁹²⁹

...

Finally, as a third step, the panel should compare the reasons for the challenged tax treatment with the benchmark tax treatment it has identified after scrutinizing a Member’s tax regime.⁹³⁰

588. The EU acknowledges the Appellate Body’s approach, but its application is superficial, at best. The EU fails to identify the appropriate tax treatment that applies to Boeing’s sales and use taxes (*i.e.*, step 1) because the EU restricts its examination to the exemptions for fuel, computers, and construction materials and fails to address the reason for applying those exemptions in the full context of the South Carolina sales and use tax system.⁹³¹ It simply assumes that the state sought to give incentives to Boeing without considering the availability of equivalent treatment

⁹²⁷ *US – Large Civil Aircraft (AB)*, para. 812.

⁹²⁸ *US – Large Civil Aircraft (AB)*, para. 812.

⁹²⁹ *US – Large Civil Aircraft (AB)*, para. 813.

⁹³⁰ *US – Large Civil Aircraft (AB)*, para. 814.

⁹³¹ EU FWS, para. 596.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

to numerous other entities in the state. The EU fails to identify the tax treatment of sales and use taxes of comparably situated taxpayers (*i.e.*, step 2) by asserting – with no proof whatsoever – that there are no comparable taxpayers.⁹³² In fact, the United States identified several such companies above at Section III.K.2.a, and many receive equivalent treatment. Finally, the pretense that there is in the entire state no taxpayer comparable to Boeing results in skipping entirely the Appellate Body’s third step, which places the comparison of taxpayers in the context of the tax system. Therefore, the EU’s analysis does not reflect the “examination of the structure of the domestic tax regime and its organizing principles” envisioned by the Appellate Body.⁹³³ The EU has accordingly failed to meet its burden of proof on this issue.

(b) The EU overstates the value of the sales and use exemptions for aircraft fuel, computer equipment, and construction materials.

589. The EU has failed to demonstrate that the sales and use tax exemptions at issue constitute a financial contribution under Article 1.1(a)(1)(ii) of the SCM Agreement. For the reasons discussed above, the value of the sales and use tax exemptions for aircraft fuel, computer equipment, and construction materials does not necessarily equate to the value of any financial contribution. Nevertheless, the United States notes that the EU overstates the value of these particular exemptions.

590. In response to the Panel’s request for information, the United States provided copies of Boeing’s notifications to the South Carolina Department of Revenue (“SCDOR”) of Boeing’s intention to utilize the sales tax exemptions established for aircraft fuel, computer equipment and construction materials.⁹³⁴ The United States also submitted the following dollar amounts of the relevant sales and use tax exemptions for years 2010, 2011 and 2012:

	2010	2011	2012
Aircraft Fuel	[BCI]
Computer Equipment	[BCI]
Construction Materials	[BCI]

Source: United States, Response to Panel’s Request for Information, para. 156.

⁹³² EU FWS, para. 597.

⁹³³ *US – Large Civil Aircraft (AB)*, para. 813.

⁹³⁴ See *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 154 (Exhibit USA-198). The notifications of Boeing’s intent to use the tax exemptions for aircraft fuel and computer equipment express Boeing’s understanding that the exemption is effective as of the date of the notices, or March 4, 2011 and June 23, 2010, respectively. Boeing’s notification regarding the tax exemption for construction materials expresses Boeing’s understanding that the exemption is effective as of November 2009. The United States also provided copies of the exemption certificates issued by the SCDOR as Exhibit USA13-293.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 189

591. The EU does not address these dollar amounts. In fact, absent from the EU submission is any reference to the fact that the EU requested the Panel to seek this information, the Panel requested the United States to provide it, and the United States complied with the Panel's request through the submission of this information. The EU ignores this information entirely and, instead, presents the Panel with a flawed estimate of \$49.14 million between 2010 and 2035.⁹³⁵ This amount is actually the sum of two separate EU estimates: the value of the exemptions in 2010 and 2011; and a separate estimate of the value of the exemptions in years 2012 to 2035. Aside from the fact that there is no reason to use estimates instead of the actual figures, both of the EU estimates are flawed even as estimates.

592. The EU first engages in a speculative exercise to estimate the sales and use tax exemption for computer equipment and construction materials for years 2010 and 2011 based on a series of unsupported assumptions.⁹³⁶ The starting point of the EU's estimate is a cost-benefit analysis conducted by the South Carolina Department of Commerce ("SCDOC").⁹³⁷ The first page of that analysis expresses a "total investment" value calculated as the sum of investments in "new buildings" and "machinery and equipment." Although there is no indication that these figures represent anything other than the total investment, covering the entirety of the project, the EU simply assumes these values can be considered investments that were in fact made entirely in 2010 and 2011.

593. Relying on these figures, the EU next attempts to estimate the proportions of the investments in "new buildings" and "machinery and equipment" that constitute construction materials and computer equipment, respectively, and are therefore subject to the sales and use tax exemptions for those items. The only evidence the EU relies on to make this leap is the conclusory statement of Patrick Libralesso.⁹³⁸ This statement, however, contains no explanation of the proportions he divined, other than to assert that they were derived based on Libralesso's experience working for Airbus.⁹³⁹ The summary statement of a Boeing competitor certainly does not constitute the type of positive evidence upon which the EU can support a *prima facie* claim.

594. Finally, the EU applies what it considers to be the applicable sales and use tax to its estimated values for construction materials and computer equipment to reach a combined estimate of \$31.14 million for 2010 and 2011. Given the series of unsupported assumptions underlying this figure, it can be disregarded and instead the unrebutted values provided by the United States can be used.

⁹³⁵ EU FWS, paras. 600-601; Exhibit EU-39, p. 1.

⁹³⁶ The EU indicates it cannot estimate the value of the sales and use tax exemption for aircraft fuel because it does not have the necessary information. EU, FWS, para. 601.

⁹³⁷ *Cost-Benefit Analysis*, South Carolina Department of Commerce (Exhibit EU-499).

⁹³⁸ See EU FWS, para. 599.

⁹³⁹ EU FWS, para. 599; Exhibit EU-26.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 190

595. The EU uses a different approach to estimate the sales and use tax exemptions in years 2012 to 2035. Whereas the EU’s 2010 and 2011 figures have *some* grounding in evidence, albeit incorrect and based on unwarranted assumptions, the second estimate is a complete fiction. Even though the values the EU relies on for its estimate for years 2010 and 2011 are estimates of Boeing’s total investment, the EU asserts those figures cannot be sufficient, ostensibly because of other actual or potential Boeing investments for which there is no evidentiary support.⁹⁴⁰ Without any pretense of trying to estimate the value of any such additional investments, the EU arbitrarily selects the figure of \$10 million as what Boeing will spend each year, from 2012 to 2035, on goods subject to the sales and use tax exemptions. The EU claims that it is relying on this figure “in the absence of better information”⁹⁴¹ and on that basis produces a total amount of \$18 million. The absence of information does not justify the resort to wholly arbitrary figures and the EU has provided no basis on which the Panel could reasonably rely on this figure.

596. Moreover, the EU’s assumption that the sales and use tax exemption for construction materials will be significant from 2012 to 2035 conflicts with its own acknowledgment that:

This exemption was effective from 9 November 2009 until 1 July 2011, at which point it was, in practice, subsumed by a previously enacted exemption, without the conditions described in paragraph 591, for construction materials used in the construction of a single manufacturing facility or distribution facility that invests at least \$100 million dollars over 18 months at a single site in South Carolina.⁹⁴²

597. In other words, the EU recognizes that the value of the exemption for construction materials, which constituted the bulk of its estimated financial contribution for years 2010 and 2011, may be diminished after July 2011. Nevertheless, in deriving its estimate for years 2012-2035, the EU treats the exemption for construction materials as if it would be utilized throughout that period.

598. There are additional indications that the EU has overstated the value to Boeing. The EU assumes that the appropriate benchmark is the measure of the tax Boeing would pay in the absence of any exemption. However, with regard to computer and construction materials exemptions, there are other exemptions, which the EU does not challenge, that Boeing would benefit from. While the exemption in Section 12-36-2120(65)(b) for computers “used in connection with a manufacturing facility” is available for any manufacturing facility meeting the notification, investment, and jobs requirements of the exemption, Section 12-36-2120(56) exempts from the tax “machines used in research and development.” Therefore, some of the computers exempt under Section 12-36-2120(65)(b) may have already been exempt under Section 12-36-2120(56). The EU has failed to identify the appropriate benchmark because it does not take into account other exemptions available to Boeing.

⁹⁴⁰ EU FWS, para. 601.

⁹⁴¹ EU FWS, para. 601.

⁹⁴² EU, First Written Submission, note 1389.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 191

v. *Income Allocation & Apportionment Agreement*

599. The Income Allocation & Apportionment Agreement with Boeing (“apportionment agreement”) does not confer a financial contribution or a benefit to Boeing. Rather, its purpose is to address South Carolina law on sourcing of sales income allocation and apportionment for corporate tax purposes.

(a) Background on South Carolina Corporate Income Tax

600. South Carolina imposes a corporate income tax of 5 percent on the South Carolina taxable income of domestic and foreign corporations.⁹⁴³ Where the taxpayer conducts business within and outside of the state, the taxpayer’s taxable income is based on the proportion of its business carried on in the state.⁹⁴⁴ That proportion is derived based on the allocation and apportionment of the taxpayer’s income under South Carolina law.

601. South Carolina’s Tax Code includes special rules for allocating certain income, such as interest or dividends or income unrelated to the taxpayer’s business, to South Carolina or elsewhere.⁹⁴⁵ The amount remaining after allocation must then be apportioned between South Carolina or other jurisdictions in which the business operates.⁹⁴⁶ For taxpayers whose principal business in South Carolina is manufacturing, the income apportioned to South Carolina is determined by multiplying its net income (after certain allocations have been made) by a sales factor.⁹⁴⁷ The South Carolina Tax Code indicates that this sales factor is the taxpayer’s total sales in South Carolina divided by its total sales elsewhere.⁹⁴⁸ A taxpayer’s sales in South

⁹⁴³ S.C. Code § 12-6-530 (Exhibit EU-509); *South Carolina Tax Incentives for Economic Development*, South Carolina Department of Revenue, p. 4 (Exhibit EU-494).

⁹⁴⁴ S.C. Code § 12-6-2210(B) (Exhibit EU-509) (“If a taxpayer is transacting or conducting business partly within and partly without this State, the South Carolina income tax is imposed upon a base which reasonably represents the proportion of the trade or business carried on within this State.”).

⁹⁴⁵ S.C. Code §§ 12-6-2220, 12-6-2230 (Exhibit EU-509).

⁹⁴⁶ Section 12-6-2240 provides that: “All income remaining after allocation... is apportioned in accordance with Section 12-6-2252, or one of the special apportionment formulas provided in Sections 12-6-2290 through 12-6-2310.” S.C. Code § 12-6-2240 (Exhibit EU-509).

⁹⁴⁷ S.C. Code § 12-6-2252(A) (Exhibit EU-509) (“A taxpayer whose principal business in this State is (i) manufacturing or a form of collecting, buying, assembling, or processing goods and materials within this State, or (ii) selling, distributing, or dealing in tangible personal property within this State, shall make returns and pay annually an income tax that includes its income apportioned to this State. Its income apportioned to this State is determined by multiplying the net income remaining after allocation pursuant to Sections 12-6-2220 and 12-6-2230 by the sales factor defined in Section 12-6-2280.”).

⁹⁴⁸ Section 12-6-2280 (Exhibit EU-509) (“Sales factor; definitions. (A) The sales factor is a fraction in which the numerator is the total sales of the taxpayer in this State during the taxable year and the denominator is the total sales of the taxpayer everywhere during the taxable year.”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 192

Carolina include the sales of goods, merchandise or property that are “received by a purchaser” in the state, “after all transportation is completed.”⁹⁴⁹

(b) The Boeing Apportionment Agreement

602. On January 1, 2012, Boeing and the SCDOR entered into the apportionment agreement.⁹⁵⁰ The apportionment agreement outlines an apportionment methodology to apply with regard to Boeing’s sales in the state. The EU takes issue with the apportionment agreement’s “special sourcing rules” regarding aircraft, which provide:

The income from the sale and delivery of airplanes to airlines or customers with the principal place of business in the United States, delivered in South Carolina, will be sourced to South Carolina.

The income from the sale and delivery of airplanes to airlines or customers with the principal place of business outside of the United States, delivered in South Carolina, will be sourced outside of South Carolina.

The income from the sale and delivery of airplanes to leasing companies, delivered in South Carolina, will be sourced depending upon the principal place of business of the ultimate operator of the airplane. For example, the sale of an airplane to a leasing company which leases the airplane to an airline which has its principal place of business outside of the United States will be sourced outside of South Carolina.

The income from the sale and delivery of airplanes to special purpose entities utilized for EXIM Bank or similar institution financing purposes, delivered in South Carolina, will be sourced depending upon the principal place of business of the ultimate operator of the airplane. For example, if an LLC domesticated in South Carolina or other US state for purposes of EXIM financing takes delivery of a plane in South Carolina, the income will be sourced outside of South Carolina if the ultimate operator of the airplane has its principal place of business outside of the United States.⁹⁵¹

These special sourcing rules provide that income from a sale of an aircraft to a customer, leasing company, or a U.S. Export-Import Bank special purpose entity, whose principal place of

⁹⁴⁹ Section 12-6-2280(B) (Exhibit EU-509) (“The term “sales in this State” includes sales of goods, merchandise, or property received by a purchaser in this State. The place where goods are received by the purchaser after all transportation is completed is considered the place at which the goods are received by the purchaser. Direct delivery into this State by the taxpayer to a person designated by a purchaser constitutes delivery to the purchaser in this State.”).

⁹⁵⁰ Apportionment Agreement (Exhibit USA-0199(BCI)) (USA13-294).

⁹⁵¹ Apportionment Agreement (Exhibit USA-199(BCI)) (USA13-294).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 193

business is outside of the United States (*i.e.*, foreign purchasers), where the aircraft is delivered in South Carolina, will not be apportioned to South Carolina for income tax purposes.

(c) The EU fails to establish that the apportionment agreement confers a financial contribution.

603. The EU’s argument regarding the apportionment agreement is based on a misunderstanding of South Carolina’s income tax law. In fact, the EU fails to establish that the apportionment agreement confers a financial contribution or a benefit.

604. The EU argues that the apportionment agreement reduces Boeing’s state income tax liability by altering the treatment of “sales in this state.”⁹⁵² In particular, according to the EU, without the apportionment agreement, “sales in this state” to airlines with a principal place of business outside the United States would increase the sales factor, whereas this is not the case under the apportionment agreement.⁹⁵³ However, in fact, “sales in this state” to airlines with a principal place of business outside the United States is a null set. As discussed above, “sales in this state” only includes sales of goods, merchandise or property that are “received by a purchaser” in the state, “after all transportation is completed.”⁹⁵⁴ Where such receipt occurs outside the United States, there is no “sale {} in this state”.

605. The EU’s flawed reasoning goes even deeper. In particular, the EU incorrectly reports the formula for determining a company’s corporate tax income under South Carolina law.⁹⁵⁵ The EU overlooks the fact that South Carolina taxable income includes not only income subject to apportionment but also any income that is allocated to South Carolina pursuant to S.C. Code §§ 12-6-2220 and 12-6-2230.

606. In sum, the EU’s allegations regarding the apportionment agreement are not anchored in fact. Therefore, the EU has failed to establish a *prima facie* case that the agreement confers anything of value to Boeing.

vi. MCIP Jobs Tax Credits

607. As discussed above, South Carolina provides corporate income tax credits for new full-time jobs created in the state and an additional income tax credit for new full-time jobs created within a multi-county industrial park (MCIP). The EU estimates that the value of the additional MCIP jobs tax credit for Project Gemini is \$19 million. However, as discussed above at Section

⁹⁵² EU FWS, para. 611.

⁹⁵³ EU FWS, paras. 611-615.

⁹⁵⁴ S.C. Code § 12-6-2280(B) (Exhibit EU-509) (“The term “sales in this State” includes sales of goods, merchandise, or property received by a purchaser in this State. The place where goods are received by the purchaser after all transportation is completed is considered the place at which the goods are received by the purchaser. Direct delivery into this State by the taxpayer to a person designated by a purchaser constitutes delivery to the purchaser in this State.”).

⁹⁵⁵ See EU FWS, note 1418.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 194

III.K.3.c, the EU fails to establish a *prima facie* case that the MCIP tax credits confer a financial contribution or a benefit.

vii. LCF Property Tax Exemption

608. South Carolina imposes a property tax assessment equal to 10.5 percent of the fair market value of property owned and used by manufacturers in the conduct of their business.⁹⁵⁶ The state also provides numerous and varying general exemptions to the property tax assessment.⁹⁵⁷ The EU contests one such exemption relating to aircraft.⁹⁵⁸

(a) The LCF property tax exemption does not confer a financial contribution.

609. The EU alleges the existence of a financial contribution under Article 1.1(a)(1)(ii), but it has failed to demonstrate that the LCF property tax exemption results in the foregoing of government revenue that is otherwise due. Therefore, it has failed to meet its burden of proof.

610. As discussed above, the Appellate Body has explained that the analysis of whether a financial contribution exists under Article 1.1(a)(1)(ii) requires “a comparison between the tax treatment that applies to the alleged subsidy recipients and the tax treatment of comparable income of comparably situated taxpayers.”⁹⁵⁹ The EU again fails in its application of the Appellate Body’s three-step approach. The EU simply assumes that the state sought to give incentives to Boeing without considering the availability of equivalent treatment to other entities in the state. The EU also fails to identify any comparably situated taxpayers. Finally, the pretense that there is in the entire state no taxpayer comparable to Boeing results in skipping entirely the Appellate Body’s third step, which places the comparison of taxpayers in the context of the tax system. The EU’s analysis does not reflect the “examination of the structure of the domestic tax regime and its organizing principles”⁹⁶⁰ and it has accordingly failed to meet its burden of proof on this issue.

⁹⁵⁶ S.C. Code § 12-43-220(a)(1) (Exhibit EU-525) (“Classifications shall be equal and uniform; particular classifications and assessment ratios; procedures for claiming certain classifications; roll back taxes. Except as otherwise provided, the ratio of assessment to value of property in each class shall be equal and uniform throughout the State. All property presently subject to ad valorem taxation shall be classified and assessed as follows: (a)(1) All real and personal property owned by or leased to manufacturers and utilities and used by the manufacturer or utility in the conduct of the business must be taxed on an assessment equal to ten and one half percent of the fair market value of the property.”).

⁹⁵⁷ S.C. Code § 12-37-220 (Exhibit EU-523).

⁹⁵⁸ EU FWS, paras. 642-656.

⁹⁵⁹ *US – Large Civil Aircraft (AB)*, para. 812.

⁹⁶⁰ *US – Large Civil Aircraft (AB)*, para. 813.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

(b) The EU overstates the value of the LCF property tax exemption.

611. In response to the Panel’s request for information, the United States submitted Exhibit USA-222(BCI) (USA13-290), which indicates the following values of each LCF in each year requested:

	2008	2009	2010	2011	2012
LCF #1	[BCI]
LCF #2	[BCI]
LCF #3	[BCI]
LCF #4	[BCI]

Source: Exhibit USA-222(BCI) (USA13-290)

612. The EU ignores this information and, instead, presents the Panel with a significantly overstated estimate of the financial contribution. The EU relies on an expert report to estimate the initial value of each LCF at the time it entered into service. The EU then depreciates those values by 5 percent each year after the date the LCF entered into service to estimate the annual property taxes otherwise due from 2009 to 2021.⁹⁶¹ The EU’s expert report does not appear to be the source of the EU’s inflated estimate because the report appears to understate the initial values to Boeing of each LCF.⁹⁶² Rather, the source of the EU’s error appears to be: (i) the EU’s unsupported assumption that *three* LCF were subject to the South Carolina property tax in 2009; and (ii) the EU’s arbitrary selection of a 5 percent rate of depreciation to estimate the value of the LCF in future years.

613. With regard to the number of LCFs in operation, the EU relied on Boeing’s 2010 and 2011 applications with the SCDOR for property tax exemptions.⁹⁶³ However, the 2010 application indicates that Boeing applied for an exemption with respect to *three LCFs in 2010* and the 2011 application indicates that Boeing applied for an exemption with respect to *four LCFs in 2011*.⁹⁶⁴ Thus, these documents are silent as to the number of aircraft for which Boeing sought an exemption in 2009. The EU notes that in Boeing’s 2010 application, Boeing responded “yes” to the question, “Did you file for exemption with this office last year?”⁹⁶⁵ But whether Boeing filed an exemption in 2009 reveals nothing about the number of LCFs for which

⁹⁶¹ EU FWS, para. 650.

⁹⁶² Exhibit EU-27; compare Exhibit USA-222 (BCI) (USA13-290).

⁹⁶³ According to the EU, its estimates “{o}nly includes years in which a given LCF was exempt from property taxes under S.C. Code § 12-37-220(B)(33)…per Boeing’s LCF Tax Exemption Applications (exhibit to EU FWS).” Exhibit EU-39, p. 4, note 4.

⁹⁶⁴ Exhibit EU-521.

⁹⁶⁵ See EU FWS, para. 644.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 196

Boeing requested an exemption.⁹⁶⁶ Thus, there is no basis to conclude that Boeing operated more than the single LCF reported by the United States.

614. Second, the EU uses an arbitrary rate of depreciation with respect to the values of the LCF between 2009 and 2021. The EU assigned base year values to the LCF based on its expert report and then calculates subsequent year values as 95 percent of the value in the prior year.⁹⁶⁷ The EU claims to have depreciated the value of each LCF “as provided for in South Carolina tax law”, citing to S.C. Code § 12-37-90.⁹⁶⁸ However, that provision provides:

The fair market value for vehicles, watercraft, and aircraft must be based on values derived from a nationally recognized publication of vehicle valuations, *except that the value may not exceed ninety five percent of the prior year's value.*⁹⁶⁹

In other words, the EU appears to assume the *maximum* valuation authorized under South Carolina law as the depreciation rate applicable to LCF. The EU fails to provide any explanation of why that figure was chosen and why it should be considered an accurate depreciation rate for LCF. Thus, even aside from the fact that the Panel has actual figures, the EU has failed to provide the Panel with an estimate upon which the Panel can reasonably rely.

viii. readySCTM Workforce Training

615. The State of South Carolina’s customized job training program, readySCTM, has trained workers for South Carolina companies since 1961. It has provided and continues to provide specialized, custom-developed training programs for numerous South Carolina companies that reflect the global marketplace, including aerospace, distribution, automotive, food and food processing, biotech, metal, call centers, plastics, chemicals, textiles, and more. The program was developed, in part, to train workers for the purpose of attracting industry to the state:

In the late 1950s and 1960s, South Carolina faced a serious problem. Young people were leaving the state, where agriculture was the economic base, to take jobs in other states where industry was growing. The state had no mechanism in

⁹⁶⁶ To the extent the EU means to imply that a “yes” answer means Boeing claimed an exemption for the same number of aircraft in the previous year, it would be inconsistent with Boeing’s answer of “yes” to the same question in its 2011 notification. In Boeing’s 2011 application, it answered “yes” to the same question, even though the number of aircraft it sought an exemption for in 2011(4) differed from the number it requested an exemption for in 2010(3). *See* Exhibit EU-521.

⁹⁶⁷ Exhibit EU-39, p. 4, note 1.

⁹⁶⁸ EU FWS, para. 650.

⁹⁶⁹ S.C. Code § 12-37-90 (Exhibit EU-523) (emphasis added).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 197

place to offer training services to its citizens or to help draw industry into the state.⁹⁷⁰

616. South Carolina describes the goal of the program as follows:

The main goal in planning the system was simple and pragmatic -- to make a suitable training program available to any adult South Carolinian who wanted to obtain a marketable skill.⁹⁷¹

The program provides customized training for new and expanding business and industry in the State of South Carolina.⁹⁷² Since the program was established, readySCTM has trained more than 271,000 workers and served more than 2,000 companies in a wide range of industries.⁹⁷³

617. The program has provided and is currently providing training to individuals seeking positions at Boeing South Carolina. In response to the Panel's request for information, the United States described the workforce recruitment, training, and development programs provided for Boeing by South Carolina agencies.⁹⁷⁴ The United States also provided the following data regarding the number of individuals readySCTM has trained for Boeing and the cost of training:

Fiscal Year (July 1 – June 30)	Number Trained	Training Cost
2009-10	215	\$2,592,273.18
2010-11	909	\$6,975,997.02
2011-12	1359	\$10,153,233.78
2012-ytd	185	\$2,360,720.59

Source: United States, Response to Panel's Request for Information, para. 163

The EU has not demonstrated that the training of workers constitutes a financial contribution within the meaning of Article 1 of the SCM Agreement.

⁹⁷⁰ *About Us*, readySC, available at www.readysc.org/about.htm (Exhibit USA-240).

⁹⁷¹ *About Us*, readySC, available at www.readysc.org/about.htm (Exhibit USA-240).

⁹⁷² *About Us*, readySC, available at www.readysc.org/about.htm (Exhibit USA-240).

⁹⁷³ *Annual Report FY 2010-2011*, readySC (Exhibit USA-225). readySC has served aerospace, distribution, automotive, food and food procession, biotech, metal, call centers, plastics, chemicals, textiles and more. *Industries Served*, readySC, available at www.readysc.org/industries (Exhibit USA-241).

⁹⁷⁴ *Response of the United States to the Panel's Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), paras. 164-169 (Exhibit USA-198).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 198

5. *The EU fails to establish that Project Emerald, Project Gemini, and their individual elements are specific to Boeing.*

618. The Article 2 specificity analysis is only relevant if and when it is determined that a measure is within the terms of reference and constitutes a subsidy. As explained above, in this case, neither of these two conditions is satisfied for Project Emerald or Project Gemini. Therefore, the Panel does not even need to reach the issue of specificity in relation to the South Carolina measures. Nonetheless, as the preceding discussion makes clear, the measures are not specific.

- a. *The provision of state bond-funded facilities and infrastructure is not specific.*
 - i. *Background on South Carolina state bond funding for industrial projects*

619. The State of South Carolina has a program to fund infrastructure and development projects through bonds sold on the open market. The bonds may be issued pursuant to three different pieces of legislation, each of which corresponds to a different variety of bond: economic development bonds (EDBs), air hub bonds (AHBs), and industrial revenue bonds (IRBs). All three types of bonds have a common overarching purpose: to enable the State of South Carolina to fund (either entirely or partially) facilities and infrastructure for economic development projects to promote the public purpose of facilitating new job creation and/or retention in South Carolina.

620. Under S.C. Code § 11-41-40, EDBs can be used to fund “financing for infrastructure,” which includes: land acquisition, site preparation, road and highway improvements, water service, wastewater treatment, employee training, environmental mitigation, training and research facilities, and building associated with an air hub facility or located on government land.⁹⁷⁵ In order for EDBs to be issued, the state must first determine that the related infrastructure project meets certain requirements, including a minimum investment and contribution to employment.⁹⁷⁶ The state then adopts a resolution issuing the bonds.⁹⁷⁷ The monetary value of EDBs that the state may issue depends on the provision under which the state issues the bonds. If the state issues the bonds pursuant to S.C. Code § 11-41-50(A), the annual debt service on the bonds may not exceed certain percentages of general revenue in the previous fiscal year.

⁹⁷⁵ S.C. Code § 11-41-30(3) (Exhibit EU-477).

⁹⁷⁶ For general economic development projects relating to land, buildings, machinery, and facilities, the investment must exceed four hundred million dollars and create more than four hundred jobs. S.C. Code § 11-40-70(2)(a) (Exhibit USA-242). There are different requirements for life sciences facilities, tourism training infrastructure projects, and convention and trade show centers. S.C. Code § 11-41-70(2)(b)-(d) (Exhibit EU-477)

⁹⁷⁷ S.C. Code § 11-41-80 (Exhibit EU-477).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 199

621. Under S.C. Code § 55-11-520, AHBs can be used to acquire land, construct, enlarge, improve, extend, renovate, and equip suitable air carrier hub terminal facilities, and purchase equipment, ground support equipment, machinery, special tools, maintenance, boarding facilities, and any real or personal property for operation of air carrier hub terminal facilities.⁹⁷⁸ In order for AHBs to be issued, there must first be a binding contract with an air carrier or the principal user of the facility committing the entity to use the facility for the lesser of five years or the time needed to retire the indebtedness.⁹⁷⁹ The Executive Director of the Aeronautics Commission then must certify, among other information, the amount to be authorized, a description of the infrastructure for which the bonds are to be issued, and that the facility is an air carrier hub terminal facility.⁹⁸⁰ The state then adopts a resolution issuing the bonds.⁹⁸¹ The amount of AHBs that the state may issue is limited to \$50 million outstanding at any time.⁹⁸²

622. Under S.C. Code § 4-29-20, IRBs can be used to finance the cost of acquisition, construction, improvement, or expansion of land, buildings, improvements on the land, including water, sewage treatment and disposal facilities, air pollution control facilities, machinery, apparatus, equipment, office facilities, and furnishing which are necessary, suitable, or useful to different manufacturing and commercial enterprises.⁹⁸³ To qualify, a project must meet a number of requirements, including that it serves the general public welfare by providing services, employment, recreation, or other public benefits.⁹⁸⁴ The state board then adopts a resolution granting approval to the issuance of the bonds.⁹⁸⁵

623. In practice, multiple types of bonds are often floated for a single infrastructure project. For example, in Project Gemini, the state authorized \$50 million dollars of AHBs and two

⁹⁷⁸ S.C. Code § 55-11-520(A) (Exhibit EU-478).

⁹⁷⁹ S.C. Code § 55-11-520(B) (Exhibit EU-478).

⁹⁸⁰ S.C. Code § 55-11-520(B) (Exhibit EU-478). An “air carrier hub terminal facility” is an airport terminal facility from which an FAA certified or licensed air carrier operates a minimum number of common carrier flights for the public, common carrier flights for cargo and freight, or two or more specially equipped planes that transport cargo and are subject to taxation. S.C. Code § 55-11-500(a) (Exhibit EU-478). The term “air carrier hub terminal facility” also includes an economic development project, as defined by S.C. Code § 11-41-30(2), that is functionally related to a facility that qualifies under S.C. Code § 55-11-500(a). S.C. Code § 55-11-505 (Exhibit EU-478).

⁹⁸¹ S.C. Code § 55-11-520(C) (Exhibit EU-478).

⁹⁸² S.C. Code § 55-11-520(A) (Exhibit EU-478).

⁹⁸³ S.C. Code § 4-29-10(3) (Exhibit USA-243).

⁹⁸⁴ S.C. Code § 4-29-60 (Exhibit USA-243).

⁹⁸⁵ S.C. Code § 4-29-140 (Exhibit USA-243). IRBs are limited obligations of the county or incorporated municipality and the principal and interest on the bonds is solely payable out of the revenues derived by the county or the incorporated municipality pursuant to the financing agreement related to the project for which the bonds were issued. S.C. Code § 4-29-30 (Exhibit USA-243). IRBs are secured bonds. S.C. Code § 4-29-40 (Exhibit USA-243).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 200

hundred and twenty million dollars of EDBs.⁹⁸⁶ For BMW, the state authorized \$210 million in IRBs and \$105 million in EDBs within 13 months of each other.⁹⁸⁷ Thus, the legal provisions authorizing the issuance of EDBs, AHBs, and IRBs provide the state with several methods to fund and/or co-fund major facilities and infrastructure projects.⁹⁸⁸

624. The EU itself appears to agree with the United States that the specificity analysis for state bonds should be at the level of the system of legislation for issuing state bonds, rather than any single piece of legislation. In particular, the EU groups its challenge of economic development bonds and air hub bonds together, as one single legal claim.⁹⁸⁹ Accordingly, it is appropriate to analyze the bonds' specificity on this basis.

ii. The system of legislation for issuing state bonds to provide facilities & infrastructure is not explicitly limited to certain enterprises within the meaning of Article 2.1(a).

625. Article 2.1(a) SCM provides:

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.

The Appellate Body has explained that such explicit limitations within the meaning of Article 2.1(a) must be “express, unambiguous, or clear from the content of the relevant instrument, and not merely ‘implied’ or ‘suggested.’”⁹⁹⁰

626. There is no provision in South Carolina law limiting access for funds raised through EDBs, AHBs, and IRBs to “certain enterprises.” Moreover, none of the individual pieces of legislation pursuant to which the bonds are issued limits access to “certain enterprises.” Accordingly, the South Carolina bond scheme is not specific within the meaning of Article 2.1(a).

627. The EU incorrectly argues that the provision of facilities and infrastructure under Project Gemini was specific because the Project Gemini Agreement and the State Budget and Control

⁹⁸⁶ See EU FWS, paras. 567-568.

⁹⁸⁷ *State Budget and Control Board Meeting of December 9, 2003* (Exhibit USA-0187); *State Budget and Control Board Meeting of December 14, 2004* (Exhibit USA-244).

⁹⁸⁸ The EU itself analyzes air hub bonds and economic development bonds as part of a single package, thus acknowledging that they operate together. See EU FWS, para. 585.

⁹⁸⁹ EU FWS, para. 585.

⁹⁹⁰ Appellate Body Report, *US – Anti-Dumping and Countervailing Duties (China)*, para. 372-373.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 201

Board resolutions authorizing the issuance of the bonds mention Boeing by name.⁹⁹¹ However, merely identifying Boeing as a party that would use facilities and infrastructure funded by state bonds is not sufficient to satisfy the requirements of Article 2.1(a). As explained above, the specificity analysis must be performed at the level of the state bond scheme, rather than the SBCB resolutions authorizing individual instances of bond issuances pursuant to that scheme. Indeed, under the EU’s test, the mere identification of the recipient of a financial contribution would necessarily render the financial contribution (if it confers a benefit) a specific subsidy.

628. In the original panel proceeding, the original Panel rejected a similar EU argument with respect to project coordinators under the Washington MSA program. In that case, the state provided project coordinators for a Boeing project site, in the context of a Project Olympus Master Site Agreement with Boeing. The EU argued that the explicit reference to Boeing in the MSA rendered the subsidy specific within the meaning of Article 2.1(a), but the original Panel rejected this reasoning: “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.”⁹⁹² Similarly, in this dispute, the provision of facilities and infrastructure funded with state bonds is a specific instance of application of a broader state-wide program. Consequently, the mere mention of Boeing in the legal instrument authorizing the issuance of state bonds does not render the subsidy specific.

iii. The system of legislation for issuing state bonds to provide facilities and infrastructure is not “in fact specific” within the meaning of Article 2.1(c).

629. Article 2.1(c) states:

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.

630. Under the analysis of Article 2.1(c), the provision of facilities and infrastructure through state-funded bonds is not specific. South Carolina has frequently authorized bonds to fund the

⁹⁹¹ See EU FWS, para. 583.

⁹⁹² *US – Large Civil Aircraft (Panel)*, para. 7.565.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 202

provision of facilities and infrastructure for a variety of enterprises. For example, South Carolina sold \$210 million in industrial revenue bonds for BMW to fund the acquisition of industrial facilities, \$105 million in economic development bonds for a new BMW manufacturing facility, \$7 million in economic development bonds for the City of Greenville to expand and renovate its convention center, and \$7 million in economic developments for Trident Technical College to expand and renovate a tourism training infrastructure project, \$7 million in economic development bonds for the City of Myrtle Beach to expand and renovate its convention center.⁹⁹³

631. Accordingly, the South Carolina bond scheme has funded facilities and infrastructure that are used by a variety of companies, only two of which are in the aerospace industry. Thus, the bond scheme is not used by a limited number of certain enterprises, nor is it predominantly used by certain enterprises.

632. In addition, the EU does not claim that South Carolina exercises discretion in a manner that would indicate that the provision of facilities and infrastructure to Boeing is specific. More than 22,000 people work for aerospace manufacturing companies and other aerospace-related businesses in South Carolina, including not only Boeing but also more than 200 others.⁹⁹⁴ BMW is another major employer, which according to one recent study generates \$1.2 billion in wages in salaries annually in the state, accounting for 1.2 percent of South Carolina's total employment.⁹⁹⁵ Therefore, to the extent that the aerospace and automotive industries have used facilities and infrastructure funded by bonds, this reflects the industrial profile of South Carolina.⁹⁹⁶

b. FILOT Agreements

633. As discussed above, FILOT agreements such as the Project Emerald Fee Agreement and the Project Gemini Fee Agreement are a general feature of South Carolina industrial property tax law, and are widely available throughout South Carolina because of the relatively high property tax rate fixed by the South Carolina state constitution.

634. FILOT agreements are not specific within the meaning of Article 2.1(a) of the SCM Agreement. The legislation allowing for FILOT Agreements does not explicitly limit access to

⁹⁹³ *State Budget and Control Board Meeting of December 9, 2003* (Exhibit USA-187); *see also* EU FWS, note 1377.

⁹⁹⁴ *Aerospace Manufacturing Companies*, South Carolina Aerospace Industry (Exhibit USA-0224).

⁹⁹⁵ *BMW in South Carolina: The Economic Impact of a Leading Sustainable Enterprise*, Douglas P. Woodward & Paulo Guimarães (Sept. 2008) (Exhibit USA-188).

⁹⁹⁶ The EU argues that the subsidies are “deemed to be specific” because they fall within the provision of Article 3 of the *SCM Agreement*. EU FWS, para. 708. However, neither South Carolina's issuance of bonds under the Project Emerald agreement, nor Boeing's use of the facilities and infrastructure built in part with the proceeds from those bonds, are export-contingent or contingent on the preference for domestic goods.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 203

FILOT Agreements to “certain enterprises.”⁹⁹⁷ The EU fails to point to any such explicit limitation, instead noting that Charleston County issued an Ordinance in 2006 as part of Project Emerald, which mentions Vought, Alenia, and GA.⁹⁹⁸ The same ordinance also notes that the County was “authorized and empowered pursuant to the provisions of Title 12, Chapter 44, of the Code of Laws of South Carolina . . . to enter into fee agreements with *any industry*”⁹⁹⁹ Thus, the Ordinance cited by the EU only confirms the absence of any explicit limitation to “certain industries.”

635. The FILOT agreements are also not specific within the meaning of Article 2.1(b) of the SCM Agreement. Under South Carolina statute, an investment of \$2.5 million is required for standard FILOT agreements, or \$1 million for certain counties or in special scenarios involving environmental cleanup.¹⁰⁰⁰ In addition, as mentioned above, an investment of \$150 million and the creation of 125 new full-time jobs, or the investment of \$400 million (with no jobs creation requirement), is the condition for qualifying for a Super Fee/Enhanced Investment FILOT agreement.¹⁰⁰¹ These are “objective criteria or conditions” within the meaning of footnote 2 of the SCM Agreement, confirming the Project Emerald Fee Agreement is not specific.

636. Finally, Project Emerald Fee Agreement is not specific within the meaning of Article 2.1(c). In 2012, fees were paid under 945 FILOT agreements statewide by 577 separate companies. There are also six Super Fee agreements in place. The EU has pointed to only two instances where FILOT agreements were granted to companies in the aerospace industry.

c. Project Site Lease

637. The EU has failed to demonstrate that the project site lease is specific. The sole basis for the EU’s claim of specificity is its unremarkable statement that the lease was with Boeing alone.¹⁰⁰² Based on the EU’s flawed reasoning, every lease would necessarily be limited.

d. MCIP jobs tax credits

638. The additional new jobs tax credit is not specific. The additional new jobs tax credit is both broadly available and widely used and therefore not specific within the meaning of Article 2.

⁹⁹⁷ See S.C. Code § 12-44 (Exhibit EU-539).

⁹⁹⁸ See EU FWS, para. 731; *Ordinance 1476 (Charleston County)* (Dec. 19, 2006) (Exhibit EU-562).

⁹⁹⁹ *Ordinance 1476 (Charleston County)* (Dec. 19, 2006) (Exhibit EU-562).

¹⁰⁰⁰ SC Code § 12-44-30(14) (Exhibit USA-245).

¹⁰⁰¹ SC Code § 12-44-30(7) (Exhibit USA-245).

¹⁰⁰² EU FWS, para. 563.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 204

639. Boeing is certainly not unique in having its project area included as part of a MCIP, as projects that have received MCIP designation include hotels, private commercial developments, tourism projects, and small to medium manufacturing projects, among others. South Carolina does not track at the state level the number of MCIPs located in the 46 South Carolina counties, but MCIPs are very common throughout the state as MCIP status is available to any business that requests that the county include such property in a MCIP and such status is routinely granted.

640. The EU has failed to demonstrate that the tax credit is specific under Article 2.1(a). The sole basis for the EU assertion of *de jure* specificity is the fact that Ordinance 1626 identified the land to be added to the MCIP as “leased by The Boeing Company.”¹⁰⁰³ The EU’s focus on Ordinance 1626, issued by the County of Charleston, is misplaced. As stated by the Appellate Body:

{T}he reference in subparagraphs (a) and (b) of Article 2.1 to “the granting authority, or the legislation pursuant to which the granting authority operates”, is critical because it situates the analysis for assessing any limitations on eligibility in the particular legal instrument or government conduct effecting such limitations. In other words, the source of any limitation is the legislation pursuant to which the granting authority operates, or the granting authority itself.¹⁰⁰⁴

641. The granting authority with regard to the new jobs tax credit is the State of South Carolina, which the EU recognizes in a subsequent paragraph of its submission,¹⁰⁰⁵ and the legislation pursuant to which it operates is Section 12-6-3360(E)(1) of the South Carolina Income Tax Act. The EU fails to demonstrate how either the State of South Carolina or Section 12-6-3360(E)(1) explicitly limits access to certain enterprises within the meaning of Article 2.1(a). To the contrary, the text of Section 12-6-3360(e)(1) makes clear that the treatment available under that provision is available to all enterprises that satisfy the minimal requirements set out in that provision and that otherwise qualify for the standard job tax credit.

642. The EU also fails to demonstrate that the new jobs tax credit is specific under Article 2.1(c) of the SCM Agreement. The EU’s unsupported assertion that Charleston County has only designated the premises of a limited number of enterprises as within an MCIP, even if true, says nothing about the number of enterprises benefiting from the new jobs tax credit in other MCIP’s throughout the state. The EU also asserts that the manner in which Charleston County exercised its discretion to amend the area of the MCIP indicates the subsidy is specific to Boeing, but the EU provides no analysis or explanation to support that assertion.¹⁰⁰⁶ Moreover, Article 2.1(c) refers to the “manner in which discretion has been exercised by the granting authority in the

¹⁰⁰³ EU FWS, para. 638.

¹⁰⁰⁴ *US – Large Civil Aircraft (AB)*, para. 748.

¹⁰⁰⁵ EU FWS, para. 640.

¹⁰⁰⁶ EU FWS, para. 639.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 205

decision to grant a subsidy.” The EU appears to conflate the actions of the granting authority with those of Charleston County.

643. Finally, the tax credit is not specific under Article 2.2 of the SCM Agreement because it is not “limited to certain enterprises located within a designated geographic region.” Rather, it is provided to a number of enterprises located within any number of different MCIPs throughout the State of South Carolina. MCIPs are pervasive in the State of South Carolina and available to any business that requests that a county include its property in a MCIP. Originally designed to encourage development for rural counties, multicounty park designation is now so commonplace in South Carolina that MCIPs are the rule, not the exception.

e. Income Allocation and Apportionment Agreement

644. South Carolina’s apportionment agreement with Boeing is not specific. Such agreements are part of a widely available effort by South Carolina to ensure that the apportionment of a taxpayer’s income represents the extent of the taxpayer’s business activity in the state, as well as providing an incentive to companies that are planning new or expanded facilities in South Carolina. As discussed above, Section 12-6-2320(B) of the South Carolina tax code specifies several alternative methods to apportion income.

645. The use of apportionment agreements is not specific under Article 2.1(a) of the SCM Agreement because they are not explicitly limited to certain enterprises. The EU’s claim of specificity under Article 2.1(a) focuses on the fact Boeing’s apportionment agreement was entered into with Boeing alone, and that H3130 amended the South Carolina tax code to incorporate an additional provision authorizing the SCDOR to enter into a 10-year apportionment agreement under the conditions set out in Section 12-6-2320(B)(3).¹⁰⁰⁷ Of course, any measure will necessarily be specific if the subsidy is defined by the complaining Member as narrowly as possible. However, the Appellate Body has indicated that the source of any limitation for purposes of Article 2.1(a) is the legislation pursuant to which the granting authority operates, or the granting authority itself.¹⁰⁰⁸ By attempting to limit the specificity analysis to the apportionment agreement, the EU has failed to address the question of whether the legislation or granting authority impose such limitations, and therefore has failed to meet its burden to demonstrate specificity under Article 2.1(a). Nevertheless, considering *arguendo* that the specific provision authorizing the use of the 10-year apportionment agreement in H3130 was the proper focus of the analysis, the EU has failed to articulate how the provision contains an express limitation to certain enterprises.

646. The EU has also failed to establish that the measure is specific under Article 2.1(c). The EU asserts that, “{t}o the best of the European Union’s knowledge,” Boeing is the only taxpayer to receive a 10-year allocation and apportionment agreement.¹⁰⁰⁹ However, since 1996,

¹⁰⁰⁷ EU FWS, para. 624.

¹⁰⁰⁸ *US – Large Civil Aircraft (AB)*, para. 840.

¹⁰⁰⁹ EU FWS, para. 625.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 206

approximately 40 projects have been approved for special allocation and apportionment methods. The EU also asserts that specificity is indicated by the granting authority’s “untrammelled discretion”, evidenced by the fact that the apportionment agreement with Boeing was tailored to Boeing’s specific business practices.¹⁰¹⁰ The EU fails to articulate how this assertion corresponds to the text of Article 2.1(c). In other words, the EU fails to explain how “the manner in which discretion has been exercised by the granting authority in the decision to grant the subsidy” – *i.e.*, the granting authority’s authorization of the use of apportionment agreements – indicates the measure is specific. The use of discretion alone does not render a subsidy specific. Moreover, Section 12-6-2320(B)(3) sets forth objective criteria that must be satisfied before an apportionment agreement can be entered into and the EU has not questioned that those criteria were satisfied.

f. readySC™ job training

647. readySC™ is not specific. The program is broadly available and has been widely used throughout the economy of South Carolina.

648. readySC™ is not specific under Article 2.1(a) of the SCM Agreement because it is not explicitly limited to certain enterprises. readySC™ continues to work with many different companies in a range of industries, as it has throughout its long history. The entirety of the EU’s claim of specificity under Article 2.1(a) is the following sentence: “{t}o launch the programme, SBCB provided special funding to the State Board for Technical and Comprehensive Education for readySC™ which was expressly earmarked for the “Boeing Project”.¹⁰¹¹ The evidence to which the EU cites merely indicates that in February 2010 the State Board for Technical and Comprehensive Education requested additional funds for its budget in light of the fact that readySC™ had begun working on the training program for Boeing. The EU fails to articulate how this information is relevant to an analysis under Article 2.1(a).

649. readySC™ is not specific under Article 2.1(c) of the SCM Agreement because there are no reasons to believe the program may, in fact, be specific. It is not used by a limited number of certain enterprises. readySC™ works with a number of businesses and industries in any given year, training 5,872 workers for 73 companies in fiscal year 2010-2011 and 4,440 workers for 82 companies in fiscal year 2011-2012.¹⁰¹² Looking beyond those two fiscal years, readySC™ will train a total of 3600 workers for Boeing, but has already trained over 270,000 workers for other employers. The EU asserts that the program is *de facto* specific because Boeing is “the predominant user” of the program and accounted for more than one-third of expenditures in 2010.¹⁰¹³

¹⁰¹⁰ EU FWS, para. 625.

¹⁰¹¹ EU, FWS, para. 667, citing Exhibit EU-537.

¹⁰¹² *Annual Report FY 2010-2011*, readySC (Exhibit USA-225); Spring/Summer 2013 Edition of SC’s Competitive Edge (Exhibit USA-227).

¹⁰¹³ EU FWSn, para. 668.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 207

650. The panel in *US – Large Civil Aircraft* found that “predominant use” for purposes of Article 2.1(c) of the SCM Agreement would exist if recipients in one industry were the “main” or “most frequent user.”¹⁰¹⁴ Article 2.1(c) itself instructs that “account shall be taken... of the length of time during which the subsidy programme has been in operation.” In light of the long history of readySCTM and the multitude of users it has served, Boeing’s usage over two years does not make it either the “main” or “most frequent” user. Therefore, the EU has failed to establish predominant use of the readySCTM program by Boeing.

651. Further, there is no indication that discretion has been exercised in a manner indicating that readySCTM is in fact specific. As explained above, readySCTM has provided and continues to provide specialized, custom-developed training programs for numerous South Carolina companies. The EU also notes that readySCTM conducted training on processes and equipment unique to Boeing, but that simply reflects the approach readySCTM takes with regard to each of the companies that participate in the program. The program is designed to provide employer-specific training and skills to all participating companies. The EU also claims that Boeing has received more extensive services than other companies, but the EU provides no evidence to support its claim.¹⁰¹⁵

g. LCF property tax exemption

652. Even aside from the fact that South Carolina’s property tax exemption for LCF does not provide a financial contribution, it is not specific within the meaning of Article 2 of the SCM Agreement. The LCF property tax exemption is part of South Carolina’s larger efforts to ensure that the State’s tax structure does not impede investment and other economic activity within the state. Therefore, the proper focus of the specificity analysis should consider South Carolina property tax exemptions collectively, because they are all contained in the South Carolina tax code and expressed as exemptions to the general rate set out in that code.

653. South Carolina’s property tax exemptions as a group are not specific under Article 2.1(a) of the SCM Agreement because they are not explicitly limited to certain enterprises. As noted above, the majority of economic activity in South Carolina qualifies for one of the exemptions. Moreover, the text of the LCF property tax exemption in particular is not expressly limited to any particular industry or group of enterprises. For example, there is no requirement that the recipient engage in any particular type of industrial activity. Rather, any company that owns two or more of the relevant aircraft (*i.e.*, specialized air cargo aircraft), regardless of the industry in which it operates, qualifies for the exemption. The requirement that a company own certain aircraft in order to take advantage of a tax exemption for those aircraft is not an express limitation to certain enterprises within the meaning of Article 2.1(a).

654. The EU also asserts that “the only logical inference” to be drawn from H3482 is that it was intended as a signal to Boeing of South Carolina’s willingness to provide financial

¹⁰¹⁴ *US – Large Civil Aircraft (Panel)*, para. 7.752.

¹⁰¹⁵ EU FWS, para. 668.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 208

incentives.¹⁰¹⁶ H3482 would be anything but a clear signal to Boeing, given that the title refers to a “specialized air cargo company”, was passed in 2009 before Boeing’s announcement, and it was made effective for tax years after 2006. In any event, the EU’s focus on H3482 is misplaced.

655. Analysis of the exemption under Article 2.1(b) of the SCM Agreement also indicates the measure is not specific. The property tax exemption is statutory and there is no discretion involved on the part of any government entity as to whether to grant the exemption or not. If a taxpayer meets the qualification of the exemption, it receives the exemption and no governmental entity can refuse any taxpayer who meets such qualifications.

656. There is also no indication that the exemption is in fact specific under Article 2.1(c) of the SCM Agreement. Property tax exemptions are widely available and widely used in South Carolina. With regard to the particular exemption for LCF, the United States indicated in response to the Panel’s request for information that the United Parcel Service, Air South, and Boeing have used the property tax exemption provided in Section 12-37-220(B)(33).¹⁰¹⁷

h. Sales & use tax exemptions

657. Aside from the fact that the sales and use tax exemptions for aircraft fuel, construction materials, and computer equipment do not provide a financial contribution, as discussed above, they are not specific within the meaning of Article 2 of the SCM Agreement. When viewed in the context of South Carolina’s overall sales and use tax structure and treatment of other business activities in the state, it is clear that these exemptions form part of a collection of widely available exemptions that operate to ensure that the state’s tax structure does not impede investment and other economic activity.

658. The sales and use tax exemptions are not specific within the meaning of Article 2.1(a) of the SCM Agreement because they are not explicitly limited to certain enterprises.¹⁰¹⁸ Notably, the EU does not claim that the exemptions are *explicitly* limited to Boeing or to aerospace manufacturing. Rather, the EU asserts that the exemptions are specific under Article 2.1(a) because they are limited to enterprises with Boeing’s “investment profile.”¹⁰¹⁹ However, Article 2.1(a) requires an inquiry into whether “the granting authority, or the legislation pursuant to which the granting authority operates, explicitly limits access to a subsidy to certain enterprises.” Section 12-36-2120 of the South Carolina Code provides many different exemptions, widely available to a variety of other business activities in the state. In fact, Section 12-36-2120 lists 79 categories of sales and use tax exemptions covering a wide range of activities.

¹⁰¹⁶ EU FWS, para. 647.

¹⁰¹⁷ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 162 (Exhibit USA-198).

¹⁰¹⁸ S.C. Code §12-36-2120(1)-(80) (EU-493).

¹⁰¹⁹ EU FWS, para. 604.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 209

659. Moreover, even within particular categories, there may be several subcategories, each providing different exemptions from the sales and use taxes for various activities. For example, the sales and use exemption for aircraft fuel falls within the general category of “coal, or coke or other fuel sold to manufacturers, electric power companies, and transportation companies.” This category also provides sales and use tax exemptions for fuel used in the generation of heat or electricity for manufacturing or motive power for transportation.¹⁰²⁰ Similarly, the sales and use tax exemption for computer equipment identified by the EU falls within a category that also provides an exemption for computer equipment used in a technology intensive facility.¹⁰²¹ And, as noted earlier, the sales and use tax exemption for construction materials also provides an exemption for construction materials that is not contingent on the same investment and employment requirements identified by the EU.

660. The EU’s claim of specificity under Article 2.1(a) focuses on the fact that the exemptions for aircraft fuel, construction equipment and computers were enacted as part of H3130.¹⁰²² The EU’s narrow focus on H3130 is misplaced because these exemptions form parts of a scheme that provides widely available exemptions to a variety of industries, as discussed above. Further, the original Panel explained why the scope of the specificity analysis should not be limited to the particular amending legislation through which a particular measure is enacted:

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 ... means that the specificity analysis is dependent upon how the complaining party chooses to define the measure it is challenging.¹⁰²³

An analysis of the exemptions under Article 2(b) of the SCM Agreement provides additional confirmation that they are not specific. Article 2(b) provides:

Where the granting authority, or the legislation pursuant to which the granting authority operates, establishes objective criteria or conditions* 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.

* Objective criteria or conditions, as used herein, mean criteria or conditions which are neutral, which do not favour certain enterprises over others, and which

¹⁰²⁰ S.C. Code § 12-36-2120(9)(b)-(d) (Exhibit EU-493).

¹⁰²¹ S.C. Code § 12-36-2120(65)(b) (Exhibit EU-493).

¹⁰²² EU FWS, para. 604.

¹⁰²³ *US – Large Civil Aircraft (panel)*, para. 7.198.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 210

are economic in nature and horizontal in application, such as number of employees or size of enterprise.

The exemptions for aircraft fuel, construction materials and computers are available to any manufacturer meeting the notification, investment and job requirements of each exemption. These requirements constitute “objective criteria” within the meaning of Article 2.1(b). In order to qualify for the various sales and use tax exemptions, an enterprise must satisfy certain investment and employment requirements, but they are nevertheless available to any type of enterprise that qualifies. The mere fact that a company must qualify for a subsidy does not mean the subsidy is expressly limited for purposes of the SCM Agreement.

661. Nor are the sales and use tax exemptions specific within the meaning of Article 2.1(c) of the SCM Agreement. The EU asserts that the sales and use tax exemptions are specific because, according to the EU, Boeing is the only beneficiary.¹⁰²⁴ As with the EU claim under Article 2.1(a), the EU’s assertion here is flawed because it is premised on the assumption that the Panel’s inquiry is limited to the narrow confines of the subsidy as defined by the EU. However, the proper focus of the specificity analysis is the South Carolina sales and use tax system more broadly and the full range of sales and use tax exemptions provided therein.

662. The United States, in response to the Panel’s request for information, indicated that taxpayers other than Boeing had notified the SCDOR of their intention to use the sales and use tax exemptions.¹⁰²⁵ Despite the EU’s insistence that this information was necessary for preparation of its first written submission, the EU does not acknowledge this statement.¹⁰²⁶ Instead, the EU relies solely on two statements to support its claim that Boeing is the only beneficiary of the sales and use tax exemptions. The first is the following statement taken from a document prepared in 2009 by the South Carolina Board of Economic Advisors regarding H3130:

Since we are not currently collecting any tax revenue from a manufacturer that meets these criteria, this section is not expected to reduce state General Fund revenue in FY2009-10.¹⁰²⁷

Contrary to the EU’s assertion, this statement does not constitute proof that the exemptions will only be used by Boeing. Rather, this is a limited statement issued prior to Boeing’s investment

¹⁰²⁴ EU FWS, para. 605.

¹⁰²⁵ *Response of the United States to the Panel’s Request for Information Pursuant to Article 13 of the DSU* (Feb. 28, 2013), para. 155 (Exhibit USA-198) (“Other taxpayers have notified the SCDOR of their intention to utilize the tax exemptions listed in question 71. However, the identification of specific taxpayers who have notified the State of their intention to utilize these sales tax exemptions is confidential taxpayer information pursuant to S.C. Code § 12-54-240.”).

¹⁰²⁶ *Communication from the EU to the Panel* (Nov. 14, 2012) (Exhibit USA-246).

¹⁰²⁷ *Statement of Estimated State Revenue Impact*, South Carolina Board of Economic Advisors (Oct. 27, 2009) (Exhibit EU-507).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 211

in South Carolina, that reveals nothing about whether Boeing is, in fact, the only user of the tax exemptions after they were established by H3130 (*i.e.*, in 2010, 2011, *etc.*).

663. The EU also relies on a press article indicated that then-governor of South Carolina, speaking generally, said that Boeing would receive “some sales-tax exemptions specific to the company.”¹⁰²⁸ To the extent the EU reads this statement as suggesting the sales and use tax exemptions are specific to Boeing under Article 2.1(c) of the SCM Agreement, the evidence shows it is incorrect.

L. Prohibited Subsidy Claims

664. As discussed in Section III.B.9 above, the United States respectfully reiterates its request to the Panel to issue a preliminary ruling that the EU’s prohibited subsidy claims are not within the terms of reference of this compliance proceeding. To date, the EU has failed to demonstrate why it may re-litigate claims that it lost and raise new claims that it could have asserted in the original proceeding, but did not. Even aside from the fact that these claims are not within the terms of reference, the EU has failed to make a *prima facie* showing of prohibited export contingency or import substitution under Articles 3.1 and 3.2 of the SCM Agreement.

665. In the EU’s panel request, it claimed that every measure identified was inconsistent with Articles 3.1(a), 3.1(b) and 3.2 of the SCM Agreement.¹⁰²⁹ The United States noted in its preliminary ruling request that it was implausible the EU was making all of the claims implied in its panel request. The U.S. skepticism was based, in part, on the fact that the EU had taken the same approach in its original Panel request, and yet made only two claims of inconsistency under Article 3.1(a) and no claims under Article 3.1(b) in the original proceeding.¹⁰³⁰

666. The EU’s argument in its first written submission bears out the implausibility of its prohibited subsidy claims. However, unlike the EU’s approach in the original proceeding, it followed through with an argument applicable to all challenged measures: that although they are not inconsistent with Articles 3.1 and 3.2 of the SCM Agreement when considered individually, they become inconsistent when considered collectively.

667. As discussed below, the EU’s claims are precluded and, in any event, fail. Grouping measures does not bring the EU’s claims within the terms of reference of this proceeding, nor does it remedy the deficiencies in the EU’s substantive arguments.

¹⁰²⁸ H3482, Act. No. 45, 2009 S.C. Acts 763 (Exhibit EU-522); EU FWS, para. 605.

¹⁰²⁹ EU Panel Request, paras. 30-31.

¹⁰³⁰ Original EU Panel Request, p. 13; *US – Large Civil Aircraft (Panel)*, para. 3.1.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 212

1. *The EU’s prohibited export-contingent and import-substitution subsidy claims are precluded and not properly within the Panel’s terms of reference.*

a. The EU is precluded from re-litigating claims it lost.

668. It is well established that a party in an Article 21.5 proceeding may not re-litigate claims resolved by the DSB recommendations and rulings.¹⁰³¹ Accordingly, the EU’s claims regarding three measures enacted under HB2294 – the Washington State B&O tax rate reduction, the Washington State B&O tax credits for preproduction development, and the Washington State sales and use tax exemptions for computer hardware, peripherals and software – are precluded. In the original proceeding, the EU asserted that each of these measures was a prohibited export-contingent subsidy under Article 3.1(a) and 3.2 of the SCM Agreement, but the original panel rejected the EU claims: “the European Communities has not demonstrated that the taxation measures enacted under HB2294 are inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement.”¹⁰³² The EU did not appeal this finding. It cannot now have a second chance to make its case.

669. Furthermore, the EU fails to point to any relevant new facts or circumstances which might change the analysis. The EU states generically that “nothing precludes a complaining Member from adducing new facts and evidence with respect to a particular subsidy in compliance proceedings,”¹⁰³³ and that “nothing precludes a subsidy referenced in a past proceeding from being referenced as a *fact* relevant to a different claim under the same provision”¹⁰³⁴ and that “in any event, the facts in question have changed significantly in the intervening period.”¹⁰³⁵ These statements are inconsistent with the facts and establish nothing of relevance to the question of terms of reference facing the Panel. A party can of course submit new facts and evidence with regard to claims properly before a compliance panel. For example, the United States has shown that it has complied with the DSB’s recommendations and rulings. However, the EU’s statement misses the point – the issue is not new facts and evidence but

¹⁰³¹ See *US – Upland Cotton (21.5) (AB)*, para. 210 (“{A} complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be WTO-consistent in the original proceedings.”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is *not* inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)); *Mexico – Corn Syrup (21.5) (AB)*, para. 79 (“We also note that Mexico did not appeal the original panel’s report, and that Articles 3.2 and 3.3 of the DSU reflect the importance to the multilateral trading system of security, predictability and the prompt settlement of disputes. We see no basis for us to examine the original panel’s treatment of the alleged restraint agreement.”).

¹⁰³² *US – Large Civil Aircraft (Panel)*, para. 7.1590.

¹⁰³³ EU Supplemental Submission on U.S. Preliminary Rulings Request, para. 4.

¹⁰³⁴ EU Supplemental Submission on U.S. Preliminary Rulings Request, para. 4.

¹⁰³⁵ EU Supplemental Submission on U.S. Preliminary Rulings Request, para. 4.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 213

rather asserting claims rejected in the original proceeding or new claims that the party could have made, but did not. If a party's capability to adduce new evidence were taken to mean that it can present any and all claims arising from that new evidence, as the EU suggests, the specific scope set out in Article 21.5 would become meaningless. Moreover, the United States agrees that facts have changed since 2006, but that is irrelevant to the legal question of whether the claims the EU has raised are properly within the terms of reference of this proceeding. Therefore, the EU's prohibited subsidy claims should be rejected.

- b. The EU is precluded from raising new claims in this compliance proceeding that it could have raised in the original proceeding, but did not.*

670. The Appellate Body has stated: a “complaining Member ordinarily would not be allowed to raise claims in an Article 21.5 proceeding that it could have pursued in the original proceedings, but did not.”¹⁰³⁶ Accordingly, to the extent the EU is now claiming that any of the measures at issue in the original proceeding are inconsistent with provisions of the covered agreements not alleged in the original proceeding, the EU's claims are precluded.

671. In the original proceeding, the EU did not assert prohibited export-contingent subsidy claims under Articles 3.1(a) and 3.2 of the SCM Agreement with respect to any of the NASA original measures, the DoD original measures, the State of Kansas and City of Wichita original measures, or two of the Washington original measures (City of Everett B&O tax rate reduction and state B&O tax credits for leasehold excise taxes).¹⁰³⁷ And the EU asserted *no* claims under Article 3.1(b) and 3.2 of the SCM Agreement in the original proceeding with respect to any measure.¹⁰³⁸ That should end the analysis – Article 21.5 of the DSU is reserved for evaluating compliance with the recommendations and rulings of the DSU, not for raising claims the complaining Member wishes it had brought originally. The EU attempts to reinvigorate the issue by arguing for collective analysis of these measures.¹⁰³⁹ However, the EU had the chance to take this approach in the original proceeding, in which it made other requests for collective analysis, but did not. The EU also fails to explain how individual measures, that it apparently did not consider to be prohibited subsidies during the original proceeding, become prohibited subsidies when viewed collectively. Nevertheless, grouping the measures does not remedy the deficiency in the EU's claim. Accordingly, the EU claims are not within the terms of reference of this compliance proceeding.

¹⁰³⁶ *US – Upland Cotton (21.5) (AB)*, para. 211. *See also US – Zeroing (21.5 – EC) (AB)*, para. 432.

¹⁰³⁷ *US – Large Civil Aircraft (Panel)*, para.3.1.

¹⁰³⁸ *US – Large Civil Aircraft (Panel)*, para.3.1.

¹⁰³⁹ EU FWS, paras. 751-776.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 214

2. *The EU’s contingent-in-fact prohibited subsidy claims*

a. The EU’s export contingency claims fail.

672. As discussed above, the EU’s export contingency claims are precluded and not within the Panel’s terms of reference. In any event, the EU fails to make a *prima facie* showing that the United States presently provides Boeing with subsidies prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement.

673. Article 3.1(a) of the SCM Agreement concerns subsidies “contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance, including those illustrated in Annex I.” Footnote 4 of the SCM agreement provides, with respect to subsidies contingent in fact on export performance:

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.

674. The EU claims that the United States provides subsidies that are contingent in fact on exports. However, the EU fails to specify with any particularity how the alleged subsidies are in fact contingent on export performance. In fact, the EU appears to acknowledge that the measures are not export-contingent:

The United States may have (generally) refrained from making subsidies expressly conditional, in law, upon export; and it may have refrained from exchanging express performance commitments with Boeing, and it even may have refrained from *always* stating expressly that a subsidy is, in part, a reward for export performance.¹⁰⁴⁰

The EU’s theory of export contingency does not rely on any explicit link between export behavior and a subsidy. Rather, the EU asserts that Boeing’s export sales are increasing as a percentage of its total sales. In addition, the EU asserts that a “representative” selection of statements unrelated to any particular measure at issue demonstrates that the United States has conditioned Boeing’s behavior. These cherry-picked statements concerning the importance of exports to the U.S. economy are unremarkable, and certainly do not allow the United States to understand how, for example, the Kansas IRBs induce Boeing to skew sales in favor of exports. The EU’s vague arguments are completely baseless and fail to make a *prima facie* showing that the United States presently provides Boeing with subsidies prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement.

¹⁰⁴⁰ EU FWS, para. 759.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 215

b. The EU’s import substitution claims fail.

675. As discussed above, the EU’s import substitution claims are precluded and not within the Panel’s terms of reference. In any event, the EU fails to make a *prima facie* showing that the United States presently provides Boeing with subsidies prohibited under Articles 3.1(b) and 3.2 of the SCM Agreement.

676. Article 3.2(b) of the SCM Agreement concerns “subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods.” The EU fails to identify a single measure that confers a subsidy contingent on the use of domestic over imported goods. Rather than look to the text or operation of a particular measure, it offers a collection of miscellaneous statements unrelated to any particular measure, which, according to the EU, have conditioned Boeing’s behavior to use domestic over imported goods:

{O}ver an extended period of time, these frequently re-integrated statements have telegraphed a clear signal to Boeing: favour the use of US domestic goods and labour too, and you will be instrumental in contributing to the achievement of this US industrial policy.¹⁰⁴¹

These cherry-picked statements are unremarkable and fail to demonstrate contingency within the meaning of Article 3.1(b). At most, they suggest that Boeing makes products in the United States and employs workers there, and that some in the United States like the fact that they do. This also has not prevented Boeing from entering into a large number of supplier relationships with foreign companies, including Alenia (based in the EU). None of this behavior, moreover, is inconsistent with the SCM Agreement. Thus, the EU has failed to make a *prima facie* showing that the United States provides subsidies prohibited under Articles 3.1(a) and 3.2 of the SCM Agreement.

3. EU’s claim regarding IAAA

677. As discussed at Section III.K.4.b.v, the EU’s claims regarding the apportionment agreement are based on a misunderstanding of how South Carolina tax law works. The EU fails to establish a *prima facie* case that the apportionment agreement confers a specific subsidy to Boeing within the meaning of Article 1, let alone a subsidy that is contingent on export performance. Therefore, the EU’s Article 3 claims with regard to the apportionment agreement fail as well.

4. EU’s claim regarding FSC

678. As already explained, the United States enacted legislation terminating the FSC/ETI tax benefits. The United States has confirmed that Boeing did not use FSC or ETI tax benefits after 2006.

¹⁰⁴¹ EU FWS, para. 773.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 216

IV. THE UNITED STATES TOOK APPROPRIATE STEPS TO REMOVE THE ADVERSE EFFECTS OF ANY UNWITHDRAWN SUBSIDIES.

A. Introduction

679. The United States demonstrated in the preceding sections that it has withdrawn all subsidies of any significance that were covered by the DSB’s recommendations and rulings. To the extent that minor subsidies were not withdrawn, their magnitude is so small – particularly in the context of the LCA industry – that they cannot plausibly cause adverse effects to the EU’s interests. The EU has thus failed to establish its case that “the United States grants and maintains subsidies to Boeing after the end of the implementation period that cause present adverse effects.”¹⁰⁴²

680. At its most basic level, EU’s adverse effects case is contradicted by developments in the market:

- The EU asserts that U.S. R&D subsidies gave Boeing an enduring technology lead in the twin-aisle market. Yet Airbus was able to quickly catch up with the head-start that the original panel found Boeing enjoyed, and today, according to Airbus, “our A350 XWB has been out-selling the 787 by better than 2- to-1 over the last five years.”¹⁰⁴³
- The EU asserts that the R&D subsidies, combined with a small magnitude of alleged tax and other subsidies, have enabled Boeing to launch and price the 737 MAX as and when it did. Yet it was *Airbus* that launched its re-engined single-aisle aircraft first (nine months before Boeing), and it is Airbus that, as it recently noted, retains a 60 percent market share lead.¹⁰⁴⁴
- The EU asserts that a small amount of alleged tax and other subsidies have benefitted the 737NG and led to price suppression and significant lost sales of the A320ceo. Yet these alleged subsidies are grossly insufficient to cause the alleged adverse effects.

681. That these market developments look so different from what the EU asserts in its first written submission is no surprise: the EU’s adverse effects case rests on shaky legal and factual ground that ignores the actual nature and magnitude of the alleged subsidies and disregards the original panel and Appellate Body findings.

682. First, the EU fundamentally misconstrues the original panel finding with respect to “*technology effects*.” The R&D subsidies were found to have accelerated the 2004 launch of the

¹⁰⁴² EU FWS, para 790.

¹⁰⁴³ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-282).

¹⁰⁴⁴ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-282).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 217

787, not to have enabled the development of technologies that Boeing would not have otherwise discovered. As a result, the EU fails to even ask when the 787 would have launched in the absence of the subsidies found in the original proceeding, a critical question for determining whether those subsidies continue to cause adverse effects. Based on their real-world experience, Boeing engineers indicate that, had Boeing not participated in the challenged NASA and DoD research, Boeing would have launched the 787 no later than 2006, with promised deliveries no later than 2010. The EU's reliance on a false premise that the 787 would never have come to market absent subsidies results in a failure to establish a genuine and substantial¹⁰⁴⁵ causal link between the alleged subsidies and the corresponding alleged adverse effects.

683. Second, the EU ignores the important changes to NASA and DoD R&D programs since 2006 – such that even if they could be considered to confer a subsidy (which the United States has shown above is not the case), they could not be expected to have the same kind of “technology effects” that the panel found to have arisen from the R&D measures in the original proceeding. NASA and DoD have both dramatically reduced the number and value of the research transactions challenged in the original proceeding – NASA by more than half, and DoD by even more. And with respect to their terms and nature, NASA has, among other things, increased access to the results of its research and focused increasingly on foundational research, thus not only removing any subsidy but also dramatically altering any possible effects that the measures could possibly have.

684. Third, with respect to “*price effects*” – the other prong of the EU's adverse effects case – the EU similarly misconstrues the original findings and ignores the small magnitude of the subsidies that could have any conceivable relation to pricing. The EU ignores the original panel's finding that R&D subsidies acting through a technology-based causal mechanism cannot also act through a price-based causal mechanism. The EU fails to assess with any rigor the magnitude of any unwithdrawn subsidies. The EU ignores the Appellate Body finding that the effects of individual smaller subsidies that act through distinct causal mechanisms cannot be cumulated when no individual subsidy or aggregated group of subsidies has a substantial causal relationship with the alleged adverse effects. And the EU fails to demonstrate that non-recurring subsidies untied to the production or development of aircraft affect Boeing's pricing. The EU thus fails to establish a genuine and substantial link between the alleged subsidies acting through a price effects causal mechanism and any adverse effects.

685. The United States demonstrates in the remainder of this submission that these critical errors, coupled with a failure to account for numerous non-attribution factors, lead to the EU's erroneous claims of significant price suppression, significant lost sales, and displacement,

¹⁰⁴⁵ Article 5 of the SCM Agreement provides: “No Member should *cause*, through the use of any subsidy...adverse effects to the interests of other Members.” (emphasis added). “The Appellate Body has consistently articulated the causal link required as a ‘genuine and substantial relationship of cause and effect’.” *US – Large Civil Aircraft (AB)*, para. 913. The United States invokes this articulated concept when it uses the phrase “genuine and substantial” in this submission. The United States does not read any additional terms into the text of Article 5.

impedance, and/or threat thereof. Accordingly, the EU has failed to establish its claims that unwithdrawn subsidies continue to cause adverse effects after the end of the compliance period.

B. Legal Framework Governing Adverse Effects Assessment in a Compliance Proceeding

1. Relevant Provisions of the SCM Agreement and DSU

686. Article 7.8 sets out the compliance obligation of a Member found to have caused adverse effects under Article 5 of the SCM Agreement:

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.

687. Article 7.8 sets out two compliance options. If a party withdraws a subsidy, it is not required to also remove the effects of that withdrawn subsidy.¹⁰⁴⁶ Conversely, a party that has taken the appropriate steps to remove the adverse effects of any unwithdrawn subsidy has also achieved compliance. If a party withdraws a subsidy, it is not required to also remove the adverse effects of that withdrawn subsidy.¹⁰⁴⁷

688. Articles 5 and 6.3 of the SCM Agreement govern the analysis for claims of subsidies that result in “adverse effects” – one type of which is “serious prejudice.” Article 5 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.

689. As the Appellate Body has stated, “Article 5 addresses a ‘situation’ that consists of causing, through the use of any subsidy, adverse effects to the interests of another Member.”¹⁰⁴⁸ Article 6.3, in turn, defines “serious prejudice” in terms of “*the effect of the subsidy*” and states that serious prejudice in the sense of Article 5(c) may arise where one or several of the following apply:

¹⁰⁴⁶ See DSU, Art. 7.8 (“the Member granting or maintaining such subsidy shall take appropriate steps to remove the adverse effects *or* shall withdraw the subsidy”) (emphasis added).

¹⁰⁴⁷ See DSU, Art. 7.8 (“the Member granting or maintaining such subsidy shall take appropriate steps to remove the adverse effects *or* shall withdraw the subsidy”) (emphasis added).

¹⁰⁴⁸ *EC – Large Civil Aircraft (AB)*, para. 686.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 219

- (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;

...

2. *Standards for Assessing Causation*

690. The Appellate Body in *EC – Large Civil Aircraft* provided the following overarching guidance regarding the analysis of causation under Article 6.3:

{T}he Appellate Body has interpreted Article 6.3 of the *SCM Agreement* as requiring the establishment of a “genuine and substantial relationship of cause and effect” between the subsidies and the alleged market phenomena under that provision, and that such relationship is not diluted by the effects of other factors. The Appellate Body has further explained that the particular market phenomena alleged under Article 6.3(c) must “result from a chain of causation that is linked to the impugned subsidy” and the effects of other factors must not be attributed to the challenged subsidies. We have explained earlier in this Report that the interpretative guidance provided by the Appellate Body under Article 6.3(c) is equally relevant to the causation analysis under subparagraphs (a) and (b) of that provision. We also recall the Appellate Body’s view 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 under Article 6.3(c).” The appropriateness of a particular method may have to be determined on a case-specific basis, depending on a number of factors and factual circumstances such as the nature, design, and operation of the subsidies at issue, the alleged market phenomena, and the extent to which the subsidies are provided in relation to a particular product or products, among others. However, a panel’s methodological discretion does not absolve it from having to establish a “genuine and substantial relationship of cause and effect” between the impugned subsidies and the alleged market phenomena under Article 6.3, and from ensuring that such causal link is not diluted by the effects of other factors.¹⁰⁴⁹

¹⁰⁴⁹ *EC – Large Civil Aircraft (AB)*, para. 1376 (citations omitted).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 220

691. Elaborating on the genuine and substantial relationship of the cause and effect test, the Appellate Body confirmed that a “but for” approach to causation may be appropriate in assessing causation.¹⁰⁵⁰ In this regard, the Appellate Body observed that:

In some circumstances, a determination that the market phenomena captured by Article 6.3 of the *SCM Agreement* would not have occurred “but for” the challenged subsidies will suffice to establish causation. This is because, in some circumstances, the “but for” analysis will show that the subsidy is both a necessary cause of the market phenomenon and a substantial cause. It is not required that the “but for” analysis establish that the challenged subsidies are a sufficient cause of the market phenomenon provided that it shows a genuine and substantial relationship of cause and effect. However, there are circumstances in which a “but for” approach does not suffice. For example, where a necessary cause is too remote and other intervening causes substantially account for the market phenomenon. This example underscores the importance of carrying out a proper non-attribution analysis.¹⁰⁵¹

3. Product Markets

692. The EU relied upon a market segmentation in the original proceeding that included three markets: 100-200 seats, 200-300 seats, and 300-400 seats.¹⁰⁵² The Appellate Body Report included the following table¹⁰⁵³ showing which aircraft were in each market:

¹⁰⁵⁰ *EC – Large Civil Aircraft (AB)*, para. 1233 (“The Appellate Body has said furthermore that it may be possible to assess whether the particular market phenomena are the effect of the subsidies by recourse to a ‘but for’ approach. Thus, one possible approach to the assessment of causation is an inquiry that seeks to identify what would have occurred ‘but for’ the subsidies.”).

¹⁰⁵¹ *EC – Large Civil Aircraft (AB)*, para. 1233.

¹⁰⁵² See *US – Large Civil Aircraft (Panel)*, para. 7.1672. This market segmentation leaves unresolved whether aircraft with more than 400 seats are further segmented in multiple markets.

¹⁰⁵³ *US – Large Civil Aircraft (AB)*, para. 897.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 221

Product market	Alleged Boeing "subsidized product"	Competing Airbus "like product"
The 100-200 seat LCA market: Single-aisle LCA with a capacity of 100-200 passengers in a 2-class configuration (or the respective cargo equivalent) and a short to medium range	737NG	A320
The 200-300 seat LCA market: Wide-body LCA with a capacity of 200-300 passengers in a 3-class configuration (or the respective cargo equivalent) and a medium to long or ultra-long range	787 767 ¹⁰⁵⁴	A330, Original A350 and A350XWB-800
The 300-400 seat LCA market: Wide-body LCA with a capacity of 300-400 passengers in a 3-class configuration (or the respective cargo equivalent) and a long or ultra-long range	777	A340 and A350XWB-900/-1000

Source: Panel Report, paras. 7.1669-7.1672.

693. The DSB adopted recommendations and rulings with respect to the 100-200 seat and 200-300 seat markets only.¹⁰⁵⁵ And within the 200-300 seat market, the Appellate Body found adverse effects based on lost sales of the A330 and the Original A350, but neither the original panel nor the Appellate Body found any of the market phenomena in Article 6.3 with respect to the A350 XWB-800, and the Appellate Body made no findings in the 300-400 seat market, which included the A350 XWB-900 and -1000.¹⁰⁵⁶

694. The EU has abandoned the product market rubric on which the DSB's recommendations and rulings are based. It now argues that the 787 is in a market with all A350 XWB variants, the 777 is in a market by itself, the A330 is in a market by itself, and the re-engined single-aisle aircraft (*i.e.*, 737 MAX and A320neo) are in their own market separate from the other, "existing technology" single-aisle aircraft (*i.e.*, 737NG and A320ceo).¹⁰⁵⁷ Thus, the EU's proposed product markets can be represented as follows:

¹⁰⁵⁴The Appellate Body included the following footnote: "Although the European Communities did not make any claims relating to the subsidization of, or Boeing's commercial behaviour in respect of, the 767, it appears to have been accepted by both parties as well as by the Panel that Boeing's 767 competed in the same 200-300 seat LCA market as the 787 and Airbus' A330, Original A350, and A350XWB-800. (See, for example, Panel Report, paras. 7.1774, 7.1775, and 7.1783)." *US – Large Civil Aircraft (AB)*, para. 897.

¹⁰⁵⁵ See *US – Large Civil Aircraft (AB)*, para. 1350.

¹⁰⁵⁶ See *US – Large Civil Aircraft (AB)*, paras. 1042 (indicating that EU only made significant price suppression and threat of significant price suppression allegations with respect to the A350 XWB-800), 1123 (affirming panel's finding that no evidence of price suppression of the A350 XWB-800).

¹⁰⁵⁷ See EU FWS, paras. 894-926.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 222

Product market	Alleged Boeing "subsidized product"	Competing Airbus "like product"
Existing technology single-aisle market	737NG	A320ceo
New technology single-aisle market	737 MAX	A320neo
Existing technology small wide-body market		A330
Existing technology large wide-body market	777	
New technology wide-body market	787 777X	A350XWB-800/-900/ -1000
No longer in any market	767	A340 Original A350

695. The United States does not agree that the EU’s proposed markets are an accurate reflection of LCA competition, and the Panel would be justified in rejecting EU adverse effects claims because they are not based on valid “markets” within the meaning of Articles 6.3(a)-(c) of the SCM Agreement. Nevertheless, even under the EU’s rubric, it still has not shown that, to the extent any subsidies remain, they are causing adverse effects after the end of the reasonable period of time to comply with the DSB’s recommendations and rulings.

C. The EU Advances Numerous Claims and Arguments that Cannot Properly Be Considered in this Compliance Proceeding.

696. It is well established that a party in an Article 21.5 proceeding may not re-litigate findings made by the panel or the Appellate Body in the original proceedings.¹⁰⁵⁸ 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.”¹⁰⁵⁹ 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.”¹⁰⁶⁰ In addition, “{a} complaining

¹⁰⁵⁸ See DSU, Art. 17.14 (requiring that the recommendations and rulings adopted by the DSB be “unconditionally accepted by the parties to the dispute”); *US – Upland Cotton (21.5) (AB)*, para. 210 (“{A} complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be WTO-consistent in the original proceedings.”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is *not* inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)); *Mexico – Corn Syrup (21.5) (AB)*, para. 79 (“We also note that Mexico did not appeal the original panel’s report, and that Articles 3.2 and 3.3 of the DSU reflect the importance to the multilateral trading system of security, predictability and the prompt settlement of disputes. We see no basis for us to examine the original panel’s treatment of the alleged restraint agreement.”).

¹⁰⁵⁹ *US – Shrimp (AB) (21.5)*, para. 97.

¹⁰⁶⁰ *EC – Bed Linen (AB) (21.5)*, para. 93.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 223

Member ordinarily would not be allowed to raise claims in an Article 21.5 proceeding that it could have pursued in the original proceedings, but did not.”¹⁰⁶¹

697. The EU ignores this principle, however, and instead advances numerous arguments with respect to alleged adverse effects that were either already rejected in the original proceeding or were not pursued there despite that they could have been. These arguments, which are discussed in greater detail in the relevant sections below, include the EU’s arguments that:

- the aeronautics R&D subsidies operate through a price causal mechanism;
- the City of Everett B&O tax rate reduction causes adverse effects;
- the aeronautics R&D, Washington State, and Kansas subsidies cause serious prejudice, and threat thereof, for the A350 XWB;
- subsidies to the 787 cause lost sales for the purposes of Article 6.3 of the SCM Agreement in the following sales campaigns: All Nippon Airways, Japan Airlines, Air Canada, Continental Airlines, and Northwest Airlines;
- subsidies to the 787 cause the threat of impedance in the U.S., Canadian, Japanese, Ethiopian, Icelandic, and Kenyan markets;
- subsidies to the 737NG cause significant suppression of A320 prices;
- subsidies to the 737NG cause the displacement and/or impedance in the Indonesian and Singaporean markets;
- subsidies to the 737NG cause a threat of serious prejudice.

698. In making these requests for findings, the EU effectively seeks to convert these compliance proceedings into a second chance to make out a case it failed to make (through commission or omission) in the original proceeding. This is not the purpose of a compliance proceeding, and the Appellate Body has explained that Article 21.5 does not permit this.

699. In addition, the EU attempts to show that alleged subsidies to the 777X, a proposed derivative of the Boeing’s existing 777 family LCA, cause present adverse effects.¹⁰⁶² At the time that the compliance Panel was established, Boeing had not launched the 777X [**BCI**], and

¹⁰⁶¹ *US – Upland Cotton (21.5) (AB)*, para. 211. *See also US – Zeroing (21.5 – EC) (AB)*, para. 432 (the finding in *US – Upland Cotton (21.5)* “excludes, in principle (ordinarily) from Article 21.5 proceedings new claims that could have been pursued in the original proceedings, but not new claims against a measure taken to comply – that is, in principle, a new and different measure.”).

¹⁰⁶² *See, e.g., EU FWS*, Section VII.H.2.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 224

Boeing still has yet to launch the 777X.¹⁰⁶³ Thus, the alleged effects of subsidies to the 777X cannot contribute to a finding that there was non-compliance at the end of the compliance period or that there were adverse effects as of the DSB’s referral of the matter to the compliance Panel.

D. Causal Mechanisms Alleged by the EU

700. The EU contends that the alleged subsidies to Boeing LCA cause present adverse effects through two causal mechanisms: (1) technology effects from alleged “non-withdrawn” NASA, FAA, and DoD aeronautics R&D subsidies; and (2) price effects from alleged “certain other of the R&D subsidies,” tied tax subsidies, and remaining state and local subsidies.¹⁰⁶⁴ The EU’s causal mechanism arguments are erroneous.

1. *The Alleged Subsidies are not Causing Present Adverse Effects through a Technology Effects Causal Mechanism.*

701. As discussed in Sections III.C-F, the United States has withdrawn the U.S. R&D subsidies to Boeing and, going forward, has substantially changed the nature and scale of the U.S. Government aeronautics R&D activities in which Boeing participates. Among these changes, NASA has “refocused” its programs toward foundational research and removed restrictions, including limited exclusive data rights (“LERD” clauses), on the access to results of its R&D efforts. It has implemented a policy to accelerate the disclosure of research results where R&D services are purchased from private entities such as Boeing. As a result, Airbus no longer faces this competitive disadvantage with respect to access to the results of NASA aeronautics R&D activities. These policy changes apply to current and future NASA R&D programs. So, whereas the EU in the original proceeding claimed that these data restrictions “provided Boeing with a head start in developing the 787, and allowed it to bring the technologically-advanced 787 to market in April 2004,”¹⁰⁶⁵ the U.S. compliance action has eliminated the possibility of such a “head start” occurring in the future. In addition, Boeing has participated in far fewer DoD assistance instruments, and has received substantially less work under the various ManTech programs. Further, DoD has eliminated the Dual Use Science and Technology Program.

702. Nevertheless, the EU alleges or presumes that U.S. R&D subsidies cause adverse effects through technology effects that operate in the following ways:

¹⁰⁶³ Statement of Boeing Engineers Regarding the Technologies and Development of the 787, 737 MAX, and 777X, Robert D. Gregg III, Eric Johnson, *et al.*, para. 71 (June 2013) (Exhibit USA-283(BCI)) (“Boeing Engineers Statement”).

¹⁰⁶⁴ EU FWS, para. 803.

¹⁰⁶⁵ EC First Written Submission, *US – Large Civil Aircraft (Panel)*, Annex C, para. 143 (Exhibit USA-293); *see also ibid.*, para. 147.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 225

- the effects of R&D subsidies to the 787 at issue in the original dispute are presumed to continue to cause present adverse effects through the 787 (alleged “original subsidy technology effects”);
- the effects of R&D subsidies to the 787 at issue in the original dispute have allegedly spilled over into 787 derivative aircraft (the 787-9 and 787-10), the 737 MAX, and the proposed 777X (alleged “spillover effects”);
- the R&D subsidies to the 787 at issue in the original dispute have “sleeper” effects that arose after the original reference period to affect the 787, 737 MAX, and 777X (alleged “sleeper effects”);
- the effects of new R&D programs since 2007 that the EU alleges confer subsidies and that allegedly affect the 787, 737 MAX, and 777X (alleged “new subsidy technology effects”).

703. No such technology effects have existed since the end of the compliance period. The EU fails to recognize this largely because it adopts a faulty premise in alleging present technology effects. The EU assumes, but does not demonstrate, that the technology effects found by the original panel have continued past the compliance deadline. In its first written submission, the EU recounts the underlying findings concerning technology effects and then moves on to discuss what it alleges are the effects of U.S. R&D subsidies on the development of post-2007 Boeing LCA, most of which are supposed “spill-over” effects from 787 technologies and/or the R&D measures at issue in the underlying proceeding.¹⁰⁶⁶ This presumes that the current market presence of the 787 and the application of its technologies are genuinely and substantially related to U.S. subsidies. There is no basis for such a presumption.

704. The technology effects of subsidies to the 787 have a finite duration. Before the original panel, the EU argued that, absent the technology effects of the U.S. R&D subsidies, the 787 would have been launched later than it was; it did not argue that Boeing never would have launched the 787:

Absent the knowledge, experience, and confidence provided by the US Government’s aeronautics R&D programmes, Boeing would have had to develop these technologies at its own risk and expense over a considerably longer period of time. Consequently, *the 787 would have been launched at a substantially later point in time*. The result would have been continued high sales at improved prices of the A330-200 and -300 models, *as well as the relatively simultaneous launch of the 787 with the comparable Airbus product*.¹⁰⁶⁷

¹⁰⁶⁶ See EU FWS, paras. 997-1027.

¹⁰⁶⁷ EC First Written Submission, *US – Large Civil Aircraft (Panel)*, Annex C, para. 189 (Exhibit USA-293).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 226

705. The original panel found that, absent the NASA and DoD R&D programs it found to be specific subsidies, Boeing “most likely” would have launched the 787, but “significantly later” than the actual 2004 launch date.¹⁰⁶⁸ This flowed from the original panel’s finding 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.”¹⁰⁶⁹

706. Accordingly, the relevant question in conducting a counterfactual analysis of the alleged subsidy technology effects on the 787 (and alleged spill-over effects from the 787 to the 737 MAX and 777X) is not “if” but “when” – *i.e.*, not *if* Boeing could have launched the 787 without the benefit of the NASA and DoD programs, but *when* the 787 launch would have occurred. The EU has failed even to address this issue, much less provide evidence and argumentation demonstrating that, after the compliance deadline, the 787 and the alleged spill-overs of its technologies would not exist.

707. This observation, as a legal matter, satisfies any U.S. burden of rebuttal. If the EU has not shown that the 787 would not have been on the market by the end of the compliance period and has not shown that alleged technology “spill-over” from that unsubsidized aircraft would not have enabled the development of other models, then there can be no finding of a genuine and substantial link between the alleged subsidies and alleged present adverse effects after the end of the compliance period.

708. Nonetheless, to assist the Panel further in evaluating the EU’s adverse effects claims, the United States will demonstrate that, in a counterfactual without the WTO-inconsistent R&D subsidies, Boeing would still have developed the technology to make the 787 available as it currently is, launch the 737 MAX when and as it did, and develop the 777X as it is. This includes a statement by Boeing engineers (the “Boeing Engineers Statement”) that addresses the counterfactual 787 launch timing question, as well as the factual inaccuracies in the EU’s other technology effects arguments.¹⁰⁷⁰

709. The Boeing Engineers Statement, along with other relevant evidence and the original panel’s findings, demonstrates that, absent the R&D subsidies found in the underlying

¹⁰⁶⁸ *US – Large Civil Aircraft (Panel)*, para. 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.”). The Appellate Body found that, unlike the “787 later” scenario, the original panel’s reference to a “767-replacement-in-2004” scenario was made “in passing” without supporting evidence or counterfactual argumentation by the parties. *See US – Large Civil Aircraft (AB)*, para. 1040.

¹⁰⁶⁹ *US – Large Civil Aircraft (Panel)*, para. 7.1774.

¹⁰⁷⁰ Boeing Engineers Statement (Exhibit USA-283 (BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 227

proceeding, Boeing would have launched the 787 well before the September 2012 compliance deadline – most likely no later than 2006 – leaving ample time for Boeing to adapt 787 technologies to the 777X and the 737 MAX.

710. This demonstration refutes the bulk of the EU’s technology effects arguments.¹⁰⁷¹ What little remains – *i.e.*, allegations of technology effects from certain post-2007 subsidies – is also erroneous as the United States demonstrates below.

711. Finally, with respect to a number of alleged R&D subsidies such as the PRSEUS and Blended Wing Body programs, the EU fails to provide argumentation that, if true, would establish that these alleged subsidies have technology effects that contribute to present adverse effects. Consequently, the Panel should exclude these measures from its assessment of the EU’s technology effects allegations.

2. *The Alleged Subsidies are not Causing Present Adverse Effects through a Price Effects Causal Mechanism.*

712. The EU argues that “certain US subsidies impact pricing of Boeing’s 737NG, 737MAX, and 787 family LCA (‘price causal mechanism’) – thereby presently causing present adverse effects to EU LCA-related interests in the form of lost sales, price suppression, displacement and impedance.”¹⁰⁷² It is not clear what the EU means by “certain.” It appears to allege that all subsidies cause adverse effects through a price causal mechanism, even where such arguments were already rejected in the original proceeding. (Alternatively, if the EU intended to limit this argument to “certain” subsidies, it has failed to identify those subsidies and therefore support its claim through adequate evidence and arguments as is its burden.)

713. The lack of clarity is an issue that continues throughout the EU’s arguments addressing adverse effects through a price causal mechanism. Specifically, the EU discusses the alleged price effects of each of its three aggregated groups of subsidies in a general price effects causation section.¹⁰⁷³ *But it does not do so on a model-specific basis*, even though not all subsidies in an aggregated group are even alleged to impact the pricing of the 787, 737 MAX and 737NG.

714. For example, even aside from the fact that Boeing has not received any FSC/ETI since at least 2006, FSC/ETI is not alleged to impact 737 MAX pricing, and the Everett B&O tax rate reduction and South Carolina income apportionment agreement are not alleged to impact the 737

¹⁰⁷¹ The United States observes that, to the extent that undelivered goods ordered pursuant to significant lost sales found in the original proceeding could under some circumstances be indicia of adverse effects arising after the end of a compliance period, the EU in this dispute has foreclosed such an argument by asserting that the 787 presently competes in a product market only with the A350 XWB. The underlying findings do not include any lost sales experienced by the A350 XWB.

¹⁰⁷² EU FWS, para. 1112.

¹⁰⁷³ See EU FWS, paras. 1112-1192.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 228

MAX or the 737NG.¹⁰⁷⁴ Nevertheless, the EU discusses the tied tax subsidies as a group.¹⁰⁷⁵ When the EU discusses price effects for each allegedly subsidized product, it merely references the general price effects causation section, which again does not discuss the subsidies on a model-specific basis.¹⁰⁷⁶ *This deficiency alone makes it impossible to draw any meaningful conclusions from the EU’s analysis, even if all of its allegations were accepted as true.*

715. The United States nevertheless addresses alleged price effects on each model; this analysis is presented in the causation portion of the model-specific sections below (*i.e.*, Sections IV.H.1, IV.I.1, and IV.J.1). In this section, the United States addresses three significant flaws in the EU’s generic arguments that apply across all LCA models, and one important concession.

716. *First*, the EU argues that the R&D subsidies cause adverse effects through a price causal mechanism.¹⁰⁷⁷ The original panel resolved this issue against the EU, and the EU is not permitted to re-litigate it in this compliance proceeding.¹⁰⁷⁸

717. In the original proceeding, the EU argued that R&D subsidies caused both technology effects and price effects.¹⁰⁷⁹ The original panel made the following finding:

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, ... 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.¹⁰⁸⁰

¹⁰⁷⁴ See EU FWS, para. 1135.

¹⁰⁷⁵ See EU FWS, paras. 1147-1143.

¹⁰⁷⁶ See EU FWS, paras.

¹⁰⁷⁷ See EU FWS, paras. 1180-1191.

¹⁰⁷⁸ See DSU, Art. 17.14; (*US – Upland Cotton (21.5) (AB)*, para. 210 (“{A} complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be WTO-consistent in the original proceedings.”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is *not* inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)); *Mexico – Corn Syrup (21.5) (AB)*, para. 79 (“We also note that Mexico did not appeal the original panel’s report, and that Articles 3.2 and 3.3 of the DSU reflect the importance to the multilateral trading system of security, predictability and the prompt settlement of disputes. We see no basis for us to examine the original panel’s treatment of the alleged restraint agreement.”).

¹⁰⁷⁹ See *US – Large Civil Aircraft (AB)*, para. 1310.

¹⁰⁸⁰ *US – Large Civil Aircraft (Panel)*, para. 7.1826.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 229

In addition, the Appellate Body observed that, “{a}t the oral hearing, both participants accepted that the Panel had not made any findings with respect to the effects of the aeronautics R&D subsidies on Boeing’s prices.”¹⁰⁸¹

718. As the Appellate Body noted, the EU did not appeal the original panel’s finding in this regard.¹⁰⁸² “In other words, the European Union {did} not contend{} on appeal, as it did before the Panel, that the aeronautics R&D subsidies *directly* affected Boeing’s *prices*, in addition to the effects that they had on Boeing’s development of technologies used on the 787.”¹⁰⁸³ Therefore, the EU’s effort to revisit this issue is particularly inappropriate. Moreover, the logic that impelled the original panel’s conclusion remains true today – if Boeing is using government payments to conduct research (as is required by law when it accepts the money) it cannot use money to lower prices. This would be counting the same money twice.

719. *Second*, the EU fails to assess with any rigor the magnitude of the subsidies. Aside from a few vague references to other parts of its first written submission containing wildly inflated figures – including projections for more than a decade into the future – the EU avoids any discussion of the magnitude of the subsidies at issue and the relevance of that magnitude in the context of this proceeding.¹⁰⁸⁴

720. The Appellate Body has stated previously that the magnitude of subsidies is important, even if precise quantification is not an indispensable part of a serious prejudice analysis.¹⁰⁸⁵ But the EU gives the subject cursory treatment with vague statements, such as: “The ‘genuine’ causal link between the tied tax subsidies and adverse effects through a price-based causal mechanism is also confirmed and amplified by the magnitude of the subsidies, which collectively is substantial and significant. . . .”¹⁰⁸⁶ Of course, as noted above, the EU never even breaks up the tied tax subsidies based on which models *the EU* alleges them to impact.

721. As we show in sections IV.H.1.b, IV.I.1.b, and IV.J.1, the magnitudes of any unwithdrawn subsidies are so small that, in the context of these products, markets, and the EU’s price effects theory, they could not plausibly have a genuine *and substantial* causal relationship with the alleged adverse effects. This reality may be the reason why the EU does not present arguments on this issue, even though *it* bears the burden of proving adverse effects.

722. *Third*, the EU has not demonstrated that any of the “miscellaneous subsidies” are causing adverse effects in light of their nature. Specifically, these are non-recurring subsidies that are not tied to the production and sale of aircraft. The EU has offered no explanation for why these

¹⁰⁸¹ *US – Large Civil Aircraft (AB)*, note 2643.

¹⁰⁸² *US – Large Civil Aircraft (AB)*, para. 1313.

¹⁰⁸³ *US – Large Civil Aircraft (AB)*, para. 1313 (emphasis original).

¹⁰⁸⁴ See EU FWS, paras. 1147, 1173-1175.

¹⁰⁸⁵ *US – Large Civil Aircraft (AB)*, para. 1006 (citing *US – Upland Cotton*, para. 467).

¹⁰⁸⁶ EU FWS, para. 1147.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 230

would be expected to lower Boeing's prices other than a general notion that money is fungible and Boeing has incentives to lower prices.¹⁰⁸⁷ The EU states that the miscellaneous subsidies result in reduced costs, which allow Boeing to lower its prices and maintain the same level of profitability.¹⁰⁸⁸ But this ignores critical differences between the alleged tied tax subsidies and the alleged miscellaneous subsidies, all of which are *untied* alleged subsidies.

723. Before the original panel, the EU argued at length that untied, non-recurring subsidies affect Boeing's pricing behavior. It tried to give this assertion an economic basis in two ways: (1) an economic viability assessment, which purported to show that, absent non-recurring subsidies, Boeing's financial performance would be so poor that it would be forced to raise prices and/or alter its product development activity; and (2) the report and model of Professor Luis Cabral, which purported to show how Boeing would allocate a portion of non-recurring subsidies to lower pricing of its products. The original panel rejected both, and the EU did not appeal these findings.¹⁰⁸⁹

724. As to the EU's economic viability arguments, it found that, "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."¹⁰⁹⁰

725. With regard to Professor Cabral's report, the original panel found a number of weaknesses in his attempt to show that untied, nonrecurring subsidies would cause Boeing to lower its prices, such as:

- "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)."¹⁰⁹¹
- "To the extent that Professor Cabral's analysis purports to demonstrate . . . 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

¹⁰⁸⁷ See EU FWS, paras. 1163-1172.

¹⁰⁸⁸ EU FWS, para. 1119.

¹⁰⁸⁹ *EC – Large Civil Aircraft (Panel)*, paras. 7.1830-7.1832.

¹⁰⁹⁰ *EC – Large Civil Aircraft (Panel)*, para. 7.1759; *id.*, para. 7.1831 ("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 {i.e., 'at least \$5.3 billion,' para. 7.1433}, 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.").

¹⁰⁹¹ *EC – Large Civil Aircraft (Panel)*, Appendix VII.F.2, para. 68.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 231

markets. . . . {W}e 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.”¹⁰⁹²

726. Thus, the EU failed in the underlying proceeding to establish generally that untied, non-recurring subsidies will affect Boeing’s pricing. Now before the Panel, the EU is making the same, unsupported price effects argument.

727. Simply put, the effects on pricing of tied tax subsidies (themselves a topic of some disagreement) cannot be assumed to be the same as the effects of untied, non-recurring subsidies. Untied subsidies, by definition, do not require the recipient to use them for a particular purpose, and it is illogical to suggest that lowering prices will always be the optimal use of subsidies. A subsidy recipient also has an obvious incentive to retain subsidies for itself, rather than pass them along to customers, if doing so is profit-maximizing.

728. Consider also that a producer does not know how many sales it will have in future years at the time it receives a non-recurring subsidy. By contrast, a tied tax subsidy corresponds directly with sales, such that fluctuations in total sales volume do not affect the calculus regarding the profitability of a particular sale. This important difference can be understood in another way. The EU notes that the more of a specific LCA a manufacturer produces, the lower the unit cost for that LCA.¹⁰⁹³ It is also true that, in terms of effects on pricing behavior, the more of a specific LCA a manufacturer produces, the less significant an untied non-recurring subsidy generally is on a per-aircraft basis. The significance (if any) of a tied tax subsidy does not become diluted in the same way when production volumes increase.

729. In the underlying proceeding, the vast majority of the subsidies were non-recurring subsidies that, according to the EU, effectively increased Boeing’s cash flow and enabled it to lower prices for its LCA. Of these, only one type, Wichita IRBs, were found to have a genuine connection to Boeing’s pricing behavior.¹⁰⁹⁴ Because it is the exception rather than the rule, it cannot support the general price effects theory that the EU once again advances with respect to untied, non-recurring subsidies.

730. Further, in making this finding, the Appellate Body relied on its understanding from the original panel “that both parties appeared to accept the proposition that, ‘where a subsidy is not tied to production of a particular product, the subsidy may still affect the behavior of the recipient of the subsidy in a manner that causes serious prejudice, depending upon the context in which it is used.’”¹⁰⁹⁵ The EU relies on the same passage.¹⁰⁹⁶ However, the EU ignores a critical

¹⁰⁹² *EC – Large Civil Aircraft (Panel)*, Appendix VII.F.2, para. 72.

¹⁰⁹³ EU FWS, para. 1127.

¹⁰⁹⁴ *See US – Large Civil Aircraft (AB)*, para. 1348.

¹⁰⁹⁵ *US – Large Civil Aircraft (AB)*, note 2713 (quoting *US – Large Civil Aircraft (Panel)*, para. 7.1828).

¹⁰⁹⁶ EU FWS, para. 1169.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 232

word in the passage: “may.” That such subsidies “may” affect pricing signifies also that they “may” not, placing on the complaining party the burden of demonstrating how such an effect occurs. The EU has not done so. As explained above, it attempted to do so in the original proceeding and failed. In this compliance proceeding, the EU has not even attempted to explain how the evidence supports the view that these particular non-recurring subsidies were used by Boeing to lower prices.

731. In its first written submission, the EU also failed to explain how the many varied untied, non-recurring subsidies cause Boeing to lower its prices in certain sales campaigns. Thus, the EU has failed to show that any of these subsidies individually, or even in the aggregate, have a genuine and substantial causal relationship with the alleged market phenomena through a price causal mechanism. Accordingly, the EU’s claim that the miscellaneous subsidies cause adverse effects fails.

732. In addition to these flaws, the EU makes an important concession. Even if the EU could show that one or more miscellaneous subsidies have a genuine connection to one or more market phenomena listed in Article 6.3, it appears to recognize that – even if aggregated – the miscellaneous subsidies are insubstantial, and therefore can only be found to cause adverse effects if their effects are cumulated with the effects of other subsidies. This is implicit in the EU’s statement that, “{p}articularly when viewed collectively with the other categories of subsidies, the magnitude of these subsidies supports a finding of a ‘genuine’ causal link for these subsidies and of a ‘substantial’ causal link in combination with the other subsidies.”¹⁰⁹⁷ The EU also emphasizes that the magnitude of the subsidy is of somewhat less consequence when the issue is whether the effects of the subsidy can be cumulated with the effects of another group of subsidies.¹⁰⁹⁸

733. Thus, the EU effectively *concedes that the miscellaneous subsidies can only cause adverse effects if their effects are cumulated with the effects of other subsidies that are both a genuine and substantial cause of adverse effects*. This is unsurprising given the findings from the original proceeding. There, the original panel determined that, even on an aggregated basis, it “was 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.”¹⁰⁹⁹ The EU did not appeal the finding that the causal relationship was not substantial, but rather that their effects were not cumulated with the effects of the tied tax subsidies. The Appellate Body agreed and found that the Wichita IRBs complemented and supplemented the tied tax subsidies found to cause two lost sales of the 737NG. Accordingly, the Appellate Body found that the Wichita IRBs caused adverse effects in the form of lost sales in the 100-200 seat market.

734. As explained above, the miscellaneous subsidies have not been shown to be genuine causes of lost sales (or price suppression or displacement, impedance, or threat thereof).

¹⁰⁹⁷ EU FWS, para. 1175.

¹⁰⁹⁸ EU FWS, para. 1174.

¹⁰⁹⁹ *US – Large Civil Aircraft (Panel)*, para. 7.1828.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 233

However, even if they were assumed to be genuine, they could only be cumulated with subsidies found to genuinely *and substantially* cause the same market phenomena. And as explained in greater detail in Section IV.F below, unlike in the original proceeding – where FSC/ETI, which accounted for the overwhelming bulk of the tied tax subsidies, drove a finding that those aggregated tied tax subsidies were substantial and genuine causes – there is no “anchor” group of aggregated subsidies for the miscellaneous subsidies to complement and supplement. Therefore, even if the miscellaneous subsidies are aggregated as a single group and found to have a genuine causal relationship with the particular market phenomenon, they cannot be found to have a substantial link and cause serious prejudice, and the EU’s claims in this regard must fail.

3. Non-Attribution Factors

735. The Appellate Body has observed that in a non-attribution analysis “it is necessary to ensure that the effects of other factors on prices are not improperly attributed to the challenged subsidies.”¹¹⁰⁰ The EU’s adverse effects allegations cannot explain the market phenomena it cites, while a number of non-subsidy factors can. Here, the United States summarizes the key non-subsidy factors that the Panel should consider. These and other non-subsidy factors are referenced throughout the U.S. adverse effects arguments.

736. The EU’s adverse effects claims and the relevant non-subsidy factors should be considered in the context of recent and current market conditions. Airbus’s A350 XWB, A320neo, and A320ceo have enjoyed a great deal of success in competing against Boeing LCA. At the recent Paris Air Show, John Leahy, Airbus’s Chief Operating Officer, Customers boasted that “{o}ur A350 XWB has been out-selling the 787 by better than 2- to-1 over the last five years. In addition our A320neo Family retains a 60 percent market share lead.”¹¹⁰¹ Moreover, Airbus’s A320ceo is selling so well that production rates have been increased to 42 aircraft per month – “the highest ever rate for any commercial aircraft.”¹¹⁰² Thus, in the light of Airbus’s own assessments of the market situation, the EU’s adverse effects case is not about any appreciable disadvantage Airbus’s LCA have vis-à-vis Boeing’s, but about whether Airbus should be doing even better than it is. Thus, in the light of Airbus’s own assessments of the market situation, the EU’s adverse effects case is not about any appreciable disadvantage Airbus’s LCA have vis-à-vis Boeing’s, but about whether Airbus should be doing even better than it is. In a *but-for-the-alleged-subsidies* counterfactual – prices, sales, and market share for the relevant Airbus LCA would remain unchanged due to other factors unrelated to subsidies.

737. **Boeing’s Non-Subsidy Technological Capacity.** Given the EU’s reliance on its technology effects causation theory, the most important non-subsidy factor is Boeing’s independent capability to develop technologically advanced LCA. Boeing engineers provide a

¹¹⁰⁰ *US – Upland Cotton (AB)*, para. 437.

¹¹⁰¹ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-282).

¹¹⁰² Airbus Results 2012, Outlook 2013, Presentation, Fabrice Bregier, Airbus (Jan. 17, 2013) (Exhibit USA-296).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 234

number of examples of this in their statement to the Panel as they demonstrate that, absent the R&D subsidies found in the underlying proceeding, Boeing would have launched the 787, and been able to leverage that experience in new products, well before the compliance deadline.¹¹⁰³ Thus, when Airbus argues that the 787, 777X, and 737 MAX would not have been available to customers absent the alleged subsidies, it is asking the compliance Panel to mistake Boeing's own resources, experience, and expertise as the effect of subsidies.

738. ***Boeing's Customer Relationships and Incumbent Status.*** A striking feature of the EU's campaign-specific adverse effects arguments is just how many of them involve existing Boeing customers. The original panel recognized the importance of Boeing's customer relationships when it rejected several 787 lost sales claims on this basis.¹¹⁰⁴ The EU also acknowledges that Boeing's customer relationships¹¹⁰⁵ and existing fleet incumbency [[HSBI]] benefits¹¹⁰⁶ can, and do, play important roles in determining the outcome of a sales campaign, but the EU does nothing more than presume (rather than demonstrate) that the price and/or technology effects of the alleged subsidies must have been a genuine and substantial cause of Boeing obtaining these orders.

739. ***Production Constraints on the A350 XWB.*** In arguing that prices and sales for the A350 XWB should be higher than they are *but for* the alleged subsidies, the EU ignores the role of production constraints. Airbus, by contrast, recognizes the connection between production capacity and sales, just as it recognizes that a full production line is a sign of success: "We could substantially increase sales for the A350-1000 if we could substantially increase production."¹¹⁰⁷ Indeed, Airbus informed investors at in January 2013 that:

the lack of delivery slots has slow{ed} sales. The program is sold out in large numbers until 2020, and {both Airbus CEO Fabrice Breigier and COO-Customers John Leahy} said they could sell a large number of aircraft, including the slowselling -1000, if there were slots available.¹¹⁰⁸

740. Thus, as the A350 XWB order book has filled up, so has the production schedule, shifting available delivery slots farther in the future. This, in turn, affects the prices Airbus can command for new A350 XWB orders. As Airbus's Christophe Mourey observes, delivery

¹¹⁰³ See Boeing Engineers Statement (Exhibit USA-283).

¹¹⁰⁴ *US – Large Civil Aircraft (Panel)*, note 3725.

¹¹⁰⁵ See, e.g., EU FWS, para. 1859.

¹¹⁰⁶ EU FWS, paras. 1678, 1682.

¹¹⁰⁷ *Wide-Body Airplanes Get Plenty of Attention at IATA; Leahy Comments on 777X, A350 and A380*, Leeham News and Comment (June 3, 2013) (Exhibit USA-289).

¹¹⁰⁸ *It's Official: Boeing Regains Lead as No.1 Aircraft Producer, Sales King, But Victory Overshadowed by 787 crisis*, Leeham News and Comment (Jan. 17, 2013) (Exhibit USA-297).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 235

delays can increase the attractiveness of other aircraft.¹¹⁰⁹ [BCI¹¹¹⁰]. In contrast, the EU is unable to identify any change in the alleged subsidization of the 787 that could explain this pattern.

741. ***Airbus’s Compromised A350 XWB-800.*** The A350 XWB-800 is the A350 XWB model closest in size to the 787, and it was the only A350 XWB model that the EU viewed as competing against the 787 in the original proceeding. It also illustrates how some variants of a successful LCA model family can suffer from an inefficient “stretch” or “shrink” of the base model’s design. The A350 XWB-900 is selling well, and as noted above, Airbus could sell more of the larger A350 XWB-1000 if only it expanded production capacity. The A350 XWB-800, in contrast, has suffered from an inefficient design (*i.e.*, a simple “shrink” of the A350 XWB-900 that leaves it overweight) and Airbus’s efforts to “de-risk” the development program by converting -800 orders for to the -900:

US Airways is one of the remaining customers for the Airbus A350-800. Airbus has been converting -800 customers to the larger -900, which has a promised entry-into-service date of mid-2014. Some customers we’ve talked to believe EIS will be closer to the end of the year. With pressure on the program—including the decision to drop the lithium-ion batteries in the wake of the Boeing 787 issues and swap to nickel-cadium batteries—resources are concentrating on the -900 and its first flight, perhaps in June. Airbus wants to de-risk the program by switching customers to the -900 and relieving pressure on the engineers and supply chain.

{US Airways CFO Derek} Kerr acknowledged Airbus wants US Airways to switch. The airline has the -800 and the -900 on order and he said it plans to take both. “They want to build 900/1000/800 {in that order, vs the planned - 900/800/1000 sequence}. Under a stand-alone US Airways, the -800 works better for us but under American Airlines, the -900 may be better.”¹¹¹¹

742. According to the CEO of Qatar Airways, Airbus likely will avoid producing the A350 XWB-800 so it can concentrate on the A350 XWB-900 and -1000:

The largest customer of Airbus's new A350 jetliner cast doubt on the future of the plane's smallest variant on Wednesday, saying the European planemaker had decided to focus on two larger wide-body models.

Qatar Airways Chief Executive Akbar Al Baker, who recently cancelled an order for the A350-800 and boosted orders for larger types, said the 270-seater would likely not be built.

¹¹⁰⁹ Statement on Current Competitive Conditions in the LCA Industry, Christophe Mourey, Airbus, paras. 39, 50 (Mar. 27, 2013) (Exhibit EU-34(BCI)).

¹¹¹⁰ Nearest Possible Date for a Delivery Position, Airbus (Exhibit USA-286(BCI)).

¹¹¹¹ *US Airways’ 757 problem*, Leeham News and Comment (Feb. 26, 2013) (Exhibit USA-298).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 236

"This is what they (Airbus) told us," he told reporters at a trade fair.¹¹¹²

743. Whether Airbus is abandoning, or just neglecting, the A350 XWB-800, it means that Airbus has decided, for reasons unrelated to the alleged subsidies, to reduce the commercial appeal of the A350 XWB model that most closely competes with the 787. The Panel should account for this, even as the EU ignores it.

744. ***Airbus's Decision to Launch the Original A350.*** In responding to the 787, Airbus had a choice: offer a suboptimal derivative immediately, or take the time (and money) to develop an all-new aircraft that offers technology and efficiency comparable to the 787. Airbus initially chose the former and entered into binding customer commitments for the Original A350. This route was of Airbus's own choosing, and it turned out to be a mistake. Indeed, had Airbus pursued the A350 XWB from the start, it would have been in a better position commercially and in terms of its relationships with customers. While the United States accepts the underlying adverse effects findings with respect to the Original A350, it does not accept the EU's contention that the subsidies to the 787 should be blamed for the effects of the Original A350 on A350 XWB prices, or any other difficulties Airbus faced as a result of its mistake in pursuing the Original A350 in the first instance.

745. ***Engine Technology.*** The EU's adverse effects claims regarding the 737 MAX elide the primary role played by engine suppliers' technologies in driving the decisions by Airbus and Boeing to re-engine their single-aisle aircraft. The new CFM Leap engines account for the overwhelming majority of the 737 MAX's commercial appeal,¹¹¹³ and they are not an effect of the alleged R&D subsidies. Considering that both Airbus and Boeing had for years been weighing the benefits of leveraging new engine technology,¹¹¹⁴ and that Airbus was the first to pursue a re-engineering strategy over an all-new single-aisle aircraft, it strains credulity to argue, as the EU does, that Boeing needed R&D subsidies to determine whether, and how, to apply new engines to the 737.

746. The United States discusses these and other non-subsidy factors below as it refutes the EU's adverse effects arguments.

E. Aggregation

1. Aggregation of Alleged Subsidies is Only Appropriate Where There Is a Sufficient Interrelationship among Them for a Panel to Infer They Operate Collectively.

747. The Appellate Body has found that

¹¹¹² *Qatar Air Says Airbus to Abandon Smallest Type of A350*, Reuters (Mar. 6, 2013) (Exhibit USA-299).

¹¹¹³ Boeing Engineers Statement, para. 48 (Exhibit USA-283).

¹¹¹⁴ *Boeing and Airbus Waver on Reworking Their Smaller Jets*, Christopher Drew and Jad Mouawad, New York Times (Nov. 16, 2010) (Exhibit USA-284).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 237

a panel may group together subsidy measures that are sufficiently similar in their design, structure, and operation in order to ascertain their aggregated effects in an integrated causation analysis and determine whether there is a genuine and substantial causal relationship between these multiple subsidies, taken together, and the relevant market phenomena identified in Article 6.3 of the *SCM Agreement* (such as significant price suppression, lost sales, displacement or impedance).¹¹¹⁵

The discretion to aggregate subsidies should only be exercised, however, “{t}o the extent a sufficient nexus with {possible interrelationships among subsidies} exists among the subsidies at issue so that their effects manifest themselves collectively.”¹¹¹⁶ Moreover, “a panel is never absolved from having to establish a ‘genuine and substantial relationship of cause and effect’ between the impugned subsidies and the alleged market phenomena under Article 6.3, or from assessing whether such causal link is diluted by the effects of other factors.” The Appellate Body further explained that “{t}he causal mechanism through which a subsidy produces effects is one criterion that will be relevant to the issue of whether aggregation is appropriate in any given instance.”¹¹¹⁷

748. The EU proposes three separate aggregated groups of subsidies. First, the EU proposes that NASA, FAA, and DoD R&D subsidies be aggregated into a group we refer to as the “R&D subsidies”. Second, the EU proposes that FSC/ETI, the Washington B&O tax rate reduction, the City of Everett B&O tax rate reduction, and the South Carolina apportionment agreement be aggregated into a group we refer to as the “tied tax subsidies.” And third, the EU proposes that a variety of other subsidies that are not in the first two groups be aggregated into a group we refer to as the “miscellaneous subsidies.” The United States will address each of the three groups proposed by the EU in turn.

2. *Alleged R&D Subsidies: The EU Has Provided No Valid Reason to Aggregate FAA with NASA and DoD, or to Attribute Any Price Effects to An Individual or Aggregated Group of Alleged R&D Subsidies.*

749. The EU relies on the original panel’s report, and the absence of an appeal on the issue, to support its contention that NASA, DoD, and FAA R&D subsidies are properly aggregated.¹¹¹⁸ The EU ignores commits two errors in its reasoning.

750. First, no FAA measure was at issue, much less aggregated with NASA and/or DoD subsidies, in the original proceeding. Thus, the aggregation findings from the original

¹¹¹⁵ *US – Large Civil Aircraft (AB)*, para. 1285.

¹¹¹⁶ *US – Upland Cotton (Panel)*, para. 7.1192.

¹¹¹⁷ *US – Large Civil Aircraft (AB)*, para. 1285.

¹¹¹⁸ EU FWS, para. 957.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 238

proceeding do not establish that the FAA CLEEN Program should be aggregated with allegedly unwithdrawn NASA and DoD subsidies.

751. And second, the EU statement that “{t}he original panel accepted the European Union’s approach to considering whether the R&D subsidies, collectively, had technology effects and price effects in various LCA markets,”¹¹¹⁹ is at best misleading because it suggests that the original panel found price effects to be a factor favoring aggregation of R&D subsidies. On the contrary:

The Panel considered that: “{h}aving analyzed the effects of the aeronautics R&D subsidies on the basis of their contribution to Boeing's development of technologies for the 787, ... 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.”¹¹²⁰

The Appellate Body continued:

The European Union has not appealed this finding. In other words, the European Union is not contending on appeal, as it did before the Panel, that the aeronautics R&D subsidies *directly* affected Boeing's *prices*, in addition to the effects that they had on Boeing's development of technologies used on the 787.¹¹²¹

752. Thus, not only did the original proceeding not lend support to aggregation of R&D subsidies due to a similar price effects causal mechanism, it settled the argument by concluding that the R&D subsidies *do not* act through a price effects causal mechanism. And the non-existent price effects causal mechanism therefore cannot possibly serve as a reason to aggregate R&D subsidies with one another.

¹¹¹⁹ EU FWS, para. 957.

¹¹²⁰ *US – Large Civil Aircraft (AB)*, para. 1312 (quoting *US – Large Civil Aircraft (Panel)*, para. 7.1826).

¹¹²¹ *US – Large Civil Aircraft (AB)*, para. 1313.

3. *Alleged Tied Tax Subsidies: The EU Errs in Aggregating Alleged Tied Tax Subsidies that Relate to Different Aircraft.*

753. The EU argues that the Panel should aggregate FSC/ETI tax exemptions, the Washington and Everett B&O tax rate reductions, and the South Carolina income allocation and apportionment agreement into a group of tied tax subsidies.¹¹²² The South Carolina apportionment agreement is outside the Panel’s terms of reference, and therefore is not eligible to be aggregated with unwithdrawn tied tax subsidies (if any exist) or with any other alleged subsidies. The United States further notes that these subsidies are not even alleged to impact the same aircraft.

4. *Miscellaneous Subsidies: The EU Groups Widely Disparate Subsidies That Have Not Been Shown to Share a Similar Design, Structure, and Operation.*

754. After arguing that R&D subsidies should be aggregated and that “tied” tax subsidies should separately be aggregated, the EU argues that a variety of miscellaneous alleged subsidies should be aggregated in a third group. The only real similarity, however, is that none of these subsidies could be placed into the other two proposed aggregation groups.

755. The EU asserts, based on the Appellate Body’s aggregation test,¹¹²³ that “{t}he remaining state and local subsidies all have a similar design, structure, and operation, supporting an approach that aggregates them for purposes of assessing their effects.”¹¹²⁴ However, the EU then fails to describe the design, structure, or operation of any measure, much less features similar to all of them. Instead, the EU states that “{t}he central feature of each of these subsidies, *regardless of the particular form each takes*, is that they increase Boeing’s non-operating cash flow.”¹¹²⁵ The EU continues: “The *majority* of the subsidies in this category consist of *various tax breaks*, while others involve the *provision of good services*.”¹¹²⁶

756. The fact that the “majority” of these alleged subsidies are either tax breaks or provisions of goods or provisions of services that benefit the recipient hardly makes them a coherent group of subsidies that warrant aggregation. Nor is it possible to conclude, as the Appellate Body’s test requires, that this grab bag of measures manifest themselves collectively. Instead this is an attempt by the EU to make otherwise insubstantial alleged subsidies seem larger by aggregating them despite their lack of similarities.¹¹²⁷

¹¹²² EU FWS, para. 965.

¹¹²³ See *US – Large Civil Aircraft (AB)*, para. 1284.

¹¹²⁴ EU FWS, para. 972.

¹¹²⁵ EU FWS, para. 973 (emphasis added).

¹¹²⁶ EU FWS, para. 974 (emphases added).

¹¹²⁷ As demonstrated below, even when aggregated, the miscellaneous subsidies do not have a genuine and substantial relationship with the market phenomena under Article 6.3(a) of the SCM Agreement.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 240

757. Even the EU’s characterization of the subsidies makes their dissimilarity apparent. The EU lists “Wichita IRBs {that} allow Boeing to avoid sales and property taxes” with the “Joint Center for Aerospace Technology Innovation {that} provides Boeing with access to university resources for use in LCA-related activities.”¹¹²⁸ It is difficult to imagine how these two alleged subsidies share the same “design, structure, and operation.”¹¹²⁹ At the very least, the EU fails to explain how they do.

758. The EU tries to convince the Panel that “{t}he particularities of each subsidy, however, are a less salient factor than the similarities in their design and operation.”¹¹³⁰ But after explaining away the relevance of the subsidies’ “particularities,” the EU does not identify any similarities in their design and/or operation. The EU merely asserts: “All of the subsidies in this group are designed to and operate to reduce Boeing’s costs and, consequently, increase its non-operating cash flow.”¹¹³¹ That is not an explanation of any similarities in design or operation. It is, at best, a restatement of the EU’s price causal mechanism theory.

759. Under the EU’s theory, literally all subsidies that allegedly share a causal pathway and are *not* tied to a product would be aggregated. The absence of a similarity – a tie to the sale of the same product – cannot suffice as the only common feature to aggregate a group of subsidies. Accordingly, the EU has failed to show that any of the alleged miscellaneous subsidies (or as the EU refers to them, “other state and local cash flow subsidies”) should be aggregated with any other alleged subsidy.

F. Cumulation of Alleged Subsidies’ Effects

760. The EU argues that “the compliance Panel must assess the collective effects of *all* of the subsidies that the United States has failed to withdraw, and that it grants or maintains, after the end of the implementation period.”¹¹³² The EU’s flawed causation arguments are based on a misapplication of the cumulation standard. In addition, the EU’s vague discussion of cumulation ignores the many important distinctions among its sweeping allegations, which effectively precludes any cumulation analysis under the Appellate Body’s paradigm. And finally, the EU re-raises its argument that the effects of R&D subsidies should be cumulated with the effects of tied tax subsidies as well as other subsidies, a position it chose not to have resolved by the Appellate Body.

1. The EU Misapplies the Cumulation Standard.

761. The Appellate Body has explained, with respect to cumulation:

¹¹²⁸ EU FWS, para. 974.

¹¹²⁹ *US – Large Civil Aircraft (AB)*, para. 1284.

¹¹³⁰ EU FWS, para. 975.

¹¹³¹ EU FWS, para. 975.

¹¹³² EU FWS, para. 934 (emphasis original).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 241

a panel may begin by analyzing the effects of a *single* subsidy, or an *aggregated* group of subsidies, in order to determine whether it constitutes a genuine and substantial cause of adverse effects. Having reached that conclusion, a panel may then assess whether *other* subsidies—either individually or in aggregated groups—have a *genuine* causal connection to the same effects, and complement and supplement the effects of the *first* subsidy (or group of subsidies) that was found, alone, to be a *genuine* and *substantial* cause of the alleged market phenomena. The other subsidies have to be a “genuine” cause, but they need not, in themselves, amount to a “substantial” cause in order for their effects to be combined with those of the first subsidy or group of subsidies that, alone, has been found to be a genuine and substantial cause of the adverse effects.¹¹³³

Thus, the Appellate Body has been clear that, before a cumulated analysis can be considered, at least one subsidy or aggregated group of subsidies must be determined to be a genuine *and* *substantial* cause of one or more of the market phenomena set out in SCM Article 6.3.¹¹³⁴

762. However, the EU contends that the “cumulation approach” applied in both *EC – Large Civil Aircraft* and *US – Large Civil Aircraft* is just a specific form of collective assessment of the effects of subsidies.¹¹³⁵ According to the EU, to collectively assess subsidies’ effects, “{a}ll that is required is that each individual subsidy (or group of aggregated subsidies) forms a genuine cause, and that, *collectively*, they form a substantial cause of the adverse effects claimed.”¹¹³⁶ In other words, cumulation is permitted even where no individual subsidy or properly aggregated group is shown to be a genuine and substantial cause of adverse effects. The Appellate Body has never cumulated subsidies’ effects in such a scenario. Rather, the Appellate Body clearly stated that “a decision as to whether the *effects* of different subsidies can be cumulated can be taken only *after* there has been a determination, for at least one subsidy or group of aggregated subsidies, that it has a genuine and substantial link to the alleged market phenomena.”¹¹³⁷

2. The EU’s Vague Cumulation Arguments Do Not Permit Assessment under the Appellate Body’s Paradigm.

763. The EU argues that it has “established the legal requirement to assess cumulatively the collective effects of subsidies that affect the market through different causal mechanisms.”¹¹³⁸ In other words, the effects of all subsidies should be cumulated. In fact, the EU contends that

¹¹³³ *US – Large Civil Aircraft (AB)*, para. 1282 (emphasis original).

¹¹³⁴ *US – Large Civil Aircraft (AB)*, para. 1282 (explaining that cumulation refers to “an examination undertaken by a panel *after* it has found that at least one subsidy has caused adverse effects as to whether the effects of other subsidies complement and supplement those adverse effects”) (emphasis original).

¹¹³⁵ See EU FWS, paras. 944-946.

¹¹³⁶ EU FWS, para. 944 (emphasis original).

¹¹³⁷ *US – Large Civil Aircraft (AB)*, para. 1292 (emphasis original).

¹¹³⁸ EU FWS, para. 1193.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 242

because all alleged subsidies provide identifiable competitive advantages to the U.S. LCA industry, “{t}he US subsidies are, therefore, such that the Appellate Body *required* their cumulative assessment.”¹¹³⁹ This is completely insufficient to demonstrate that cumulation is appropriate. The EU’s arguments specify no particular market phenomena, no particular product market, and no discussion based on an accounting of which subsidies are relevant to each particular market and phenomenon.

764. The Appellate Body has explained that, after determining that a subsidy (or an aggregated group of subsidies) has been found to constitute a genuine and substantial cause of adverse effects, “a panel may then assess whether *other* subsidies—either individually or in aggregated groups—have a *genuine* causal connection to the same effects, and complement and supplement the effects of the *first* subsidy (or group of subsidies) that was found, alone, to be a *genuine* and *substantial* cause of the alleged market phenomena.”¹¹⁴⁰ Of course, assessing whether other subsidies contribute to the “same effects” as the first subsidy requires knowing what effects were caused by the first subsidy. In other words, the findings with respect to the first subsidy dictate the criteria for subsequent cumulation analyses.

765. For example, in the original proceeding, the Appellate Body found that the FSC/ETI subsidies and the State of Washington B&O tax rate reduction, on an aggregated basis (as “tied tax subsidies), through their effects on Boeing’s prices for the 737NG, were a genuine and substantial cause of two lost sales in the 100-200 seat market.¹¹⁴¹ Cumulation of the “remaining subsidies” with the aggregated tied tax subsidies “require{d} an affirmative showing that there {wa}s a genuine causal nexus between the first group of subsidies and *the effects and market phenomena* to which they are alleged to be contributing.”¹¹⁴² Thus, the remaining subsidies could only be cumulated where they had a genuine causal connection to 737NG pricing. genuine causal link could only be established where uncontested facts and the panel’s factual findings linked a remaining subsidy to the 737NG.¹¹⁴³ And even then, the findings that could be made with respect to other subsidies were limited by the findings of particular effects already made for the first subsidy.

766. Thus, only the effects of the Wichita IRBs were cumulated with the effects of the tied tax subsidies because only the Wichita IRBs were linked to the 737NG, allowing the Appellate Body to “consider that Boeing’s IRB benefits enhanced the pricing flexibility that it enjoyed by reason of the tied tax subsidies in the circumstances of those two sales campaigns.”¹¹⁴⁴ And even then, the finding with respect to the Wichita IRBs was limited to significant lost sales in the 100-200 seat market – to the exclusion of other forms of serious prejudice (*e.g.*, price suppression,

¹¹³⁹ EU FWS, para. 472 (emphasis added).

¹¹⁴⁰ *US – Large Civil Aircraft (AB)*, para. 1287 (emphasis original).

¹¹⁴¹ *US – Large Civil Aircraft (AB)*, para. 1334.

¹¹⁴² *US – Large Civil Aircraft (AB)*, para. 1335 (emphasis added).

¹¹⁴³ *US – Large Civil Aircraft (AB)*, para. 1337.

¹¹⁴⁴ *US – Large Civil Aircraft (AB)*, para. 1348.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 243

displacement) and other markets (*e.g.*, 200-300 seat market) – due to the limited scope of the adverse effects found to be caused by the first subsidy (*i.e.*, the aggregated group consisting of FSC/ETI subsidies and the State of Washington B&O tax rate reduction).¹¹⁴⁵

767. It is often possible for the complaining Party to identify a “first” or “anchor” subsidy (or aggregated group of subsidies) at the outset of a proceeding, particularly in a compliance proceeding where the issues have already been clarified by the original proceeding and the DSB’s recommendations and rulings. For example, the United States in *EC – Large Civil Aircraft (21.5)*, made the following request:

the United States asks the compliance Panel to begin its assessment by conducting an integrated analysis of the effects of the following LA/MSF, all of which share the same structure, design and operation:

{list omitted}

284. The United States requests that, after assessing whether the EU has removed the adverse effects of launch aid, the compliance Panel assess whether the EU has removed the adverse effects of the equity infusion and infrastructure subsidies that “complement and supplement” the effects of launch aid, consistent with the approach endorsed by the Appellate Body.¹¹⁴⁶

768. The EU, by contrast, identifies no anchor subsidy or group of subsidies. This is not to say that, if the Panel were to find that a subsidy or aggregated group of subsidies had a genuine and substantial relationship to the alleged adverse effects, it could only at that point undertake a cumulation analysis based on whatever effects it found. (Of course, the United States does not believe that such a subsidy or group of subsidies exists.) But the EU’s broad, vague arguments do not allow any reasonable insight into how such an analysis should be conducted.

769. Rather, the approach the EU has chosen to take in this compliance proceeding of making sweeping allegations, without regard for the issues resolved in the original proceeding, makes specific cumulation arguments for each market and type of adverse effect extremely difficult. In the original proceeding, NASA and DoD R&D subsidies were found to cause adverse effects in the 200-300 seat market through a technology effect causal mechanism (and not through a price causal mechanism). The EU now alleges that R&D subsidies cause adverse effects in a “new technology twin-aisle market,” an “existing technology single-aisle market,” and a “new technology single-aisle market.” The EU attempts to resuscitate its previously rejected argument that these R&D subsidies cause adverse effects through a price causal mechanism.

¹¹⁴⁵ See *US – Large Civil Aircraft (AB)*, para. 1348 (finding that “the effects of the City of Wichita IRBs complemented and supplemented the price effects of the FSC/ETI subsidies and the State of Washington B&O tax rate reduction, thereby causing serious prejudice, in the form of significant lost sales, within the meaning of Articles 5(c) and 6.3(c) of the *SCM Agreement*, in the 100-200 seat LCA market”).

¹¹⁴⁶ First Written Submission of the United States, *EC – Large Civil Aircraft (21.5)*, paras. 283-284 (May 25, 2012) (Exhibit USA-292).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 244

The EU brings in new entities (*e.g.*, FAA, South Carolina), new alleged subsidies (*e.g.*, JCATI), old subsidies it did not raise in the original proceeding (*e.g.*, “new” DoD program elements). It proposes to aggregate subsidies that it does not even allege to impact the same product markets (*e.g.*, South Carolina income apportionment agreement (new technology twin-aisle market) aggregated with Everett B&O tax rate reduction (single-aisle markets)). It argues that aircraft it argued were not in the same market in the original proceeding are now in the same market (*e.g.*, 787 and A350 XWB-900/-1000). It even reverses positions it took in the original proceeding (*e.g.*, FSC/ETI did not impact 787, but now impacts certain 787s sold before 2006).

770. This imprecise, broad and sweeping approach does not provide a sufficient basis to cumulate all the different subsidies/product market/market phenomena combinations. Of course, the self-inflicted challenge of trying to make out such an argument does not relieve the EU of its burden. Its current vague arguments are insufficient and effectively preclude analysis under the Appellate Body’s cumulation paradigm.

3. *The EU Cannot Argue for Cumulation of the Effects of R&D Subsidies with the Effects of Tied Tax Subsidies or Miscellaneous Subsidies in this Compliance Proceeding.*

771. The EU is precluded from arguing that the effects of aeronautics R&D subsidies should be cumulated with the effects of the tied tax subsidies or any of the miscellaneous subsidies. It is well established that an Article 21.5 proceeding takes as a given the adopted findings made by the panel or the Appellate Body in the original proceeding.¹¹⁴⁷ In addition, “{a} complaining Member ordinarily would not be allowed to raise claims in an Article 21.5 proceeding that it could have pursued in the original proceedings, but did not.”¹¹⁴⁸ Article 21.5 has been understood to permit a party to re-raise identical arguments and claims in compliance proceedings related to the same measures challenged in the original proceeding in the narrow circumstance where the Appellate Body is unable to complete the analysis.¹¹⁴⁹ But this has not

¹¹⁴⁷ See DSU, Art. 17.14 (requiring that the recommendations and rulings adopted by the DSB be “unconditionally accepted by the parties to the dispute”); *US – Upland Cotton (21.5) (AB)*, para. 210 (“{A} complainant may not reassert the same claim against an unchanged aspect of the measure that had been found to be WTO-consistent in the original proceedings.”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is *not* inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)); *Mexico – Corn Syrup (21.5) (AB)*, para. 79 (“We also note that Mexico did not appeal the original panel’s report, and that Articles 3.2 and 3.3 of the DSU reflect the importance to the multilateral trading system of security, predictability and the prompt settlement of disputes. We see no basis for us to examine the original panel’s treatment of the alleged restraint agreement.”).

¹¹⁴⁸ *US – Upland Cotton (21.5) (AB)*, para. 211. See also *US – Zeroing (21.5 – EC) (AB)*, para. 432 (the finding in *US – Upland Cotton (21.5)* “excludes, in principle (ordinarily) from Article 21.5 proceedings new claims that could have been pursued in the original proceedings, but not new claims against a measure taken to comply – that is, in principle, a new and different measure.”).

¹¹⁴⁹ *US – Upland Cotton (21.5) (AB)*, para. 210.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 245

been extended to the situation where the party does not request that the Appellate Body complete the analysis.

772. In the original proceeding, the Appellate Body found that the Panel could have assessed whether the effects of the R&D subsidies could be cumulated with the effects of the B&O tax rate reductions (*i.e.*, the tied tax subsidies relevant to the 200-300 seat market at issue), even though the two groups of subsidies operated through distinct causal mechanisms.¹¹⁵⁰ However, the EU declined to request that the Appellate Body complete the analysis of whether the B&O tax reductions *should* be cumulated with the R&D subsidies.¹¹⁵¹ Thus, the DSB adopted no recommendations or rulings with respect to the tied tax subsidies in the 200-300 seat market, the only market in which adverse effects were found to be caused by the R&D subsidies.

773. The EU now re-raises the issue in this compliance proceeding, again arguing that the R&D subsidies should be cumulatively assessed with all other subsidies. Where the EU itself chose not to pursue resolution of this issue by the Appellate Body, however, this is similar to the situation where a party chooses not to appeal an issue. In essence, the EU in this dispute appealed the original panel’s determination, but did not appeal the ultimate conclusion that the R&D subsidies should not be cumulated with the effects of the relevant tied tax subsidies. Because it did not present that issue to the Appellate Body, it avoided a finding whether it had brought forward sufficient evidence to make out its case before the original panel. To permit the EU to seek cumulation in this proceeding would essentially afford it a second opportunity to make out a causation theory as part of its case. It would be unfair for the United States to come into compliance based on one rubric, only to have the EU resuscitate a different rubric in the compliance proceeding. Therefore, the EU should be precluded from re-raising this issue in this compliance proceeding.

G. The EU Has Failed to Allege a *Prima Facie* Case with Respect to Alleged Price Suppression of the A330.

774. Under Article 6.3(c) of the SCM Agreement, price suppression exists where “the effect of the subsidy is ... significant price suppression ... in the same market.” As the EU argues that the A330 is in a market all by itself, it has not identified a market within which price suppression is possible with respect to the A330. Therefore, it has failed to make a *prima facie* case.¹¹⁵²

775. The EU correctly lays out the standard in Article 6.3(c):

¹¹⁵⁰ *US – Large Civil Aircraft (AB)*, para. 1320.

¹¹⁵¹ *US – Large Civil Aircraft (AB)*, para. 1321.

¹¹⁵² See EU FWS, para. 1226 (claiming to demonstrate “that the US aeronautics R&D subsidies benefiting Boeing’s 787 family LCA continue, as they did during 2004-2006, to presently cause present adverse effects in the form of significant price suppression of A330 family LCA, within the meaning of Article 6.3(c) of the *SCM Agreement*”).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 246

Article 6.3(c) of the *SCM Agreement* provides that subsidies cause serious prejudice to a Member’s interests “in the sense of paragraph (c) of Article 5”, where it is demonstrated that “the effect of the subsidy is ... significant price suppression ... in the same market.”¹¹⁵³

776. Thus, significant lost sales claims require an allegation that the subsidized product and product alleged to have had its price suppressed are in the “same market.” However, the EU states that “no other aircraft exercise significant ‘competitive constraints’ on the A330 or are considered by customers ‘substitutable’ for the A330.”¹¹⁵⁴ The EU concludes that the A330 is in a monopoly market for “existing technology, small wide-body aircraft that are available for near-term delivery positions.”¹¹⁵⁵ While, as a factual matter, the EU is wrong, it is of no consequence here. Having failed to assert that the A330 is in the same market as any allegedly subsidized aircraft, the EU has failed to even allege the basic elements of a price suppression claim under Article 6.3(c); in other words, the EU has failed to make out a *prima facie* case. Accordingly, there is no basis for the Panel to find that the United States has failed to achieve compliance due to significant price suppression of the A330.

H. The EU Has Failed to Demonstrate that Alleged Subsidies to the 787 and/or the 777X Cause Adverse Effects Through Significant Price Suppression, Significant Lost Sales, Impedance, or Threat Thereof With Respect to the A350 XWB.

777. With its claims of adverse effects regarding alleged subsidies to the 787, the EU disregards the underlying findings, as well as the U.S. compliance steps and changes in the market situation that have eliminated any competitive advantage conferred by subsidies to the 787.

778. The original panel found that the aeronautics R&D subsidies gave the 787 a head start into the market. The United States has withdrawn those subsidies, and it has taken steps to ensure that its aeronautics R&D programs do not give U.S. LCA a competitive advantage in the future. In the present, the 787 no longer enjoys a subsidized head start, just as it has been outsold by the A350 XWB over the past five years.¹¹⁵⁶ Simply put, the EU has received its rightful remedy, and the alleged subsidies are not causing present serious prejudice.

779. The United States demonstrates this below, first by refuting the EU’s attempts to demonstrate a causal link under its technology effects and price effects theories, then by detailing the EU’s failure to establish its claims of significant price suppression, significant lost sales, and impedance, or threat thereof, under Articles 5 and 6 of the *SCM Agreement*.

¹¹⁵³ EU FWS, para. 1227

¹¹⁵⁴ EU FWS, para. 906.

¹¹⁵⁵ EU FWS, para. 800.

¹¹⁵⁶ *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-282) (quoting Airbus Chief Operating Officer – Customers John Leahy: “Our A350 XWB has been out-selling the 787 by better than 2- to-1 over the last five years.”).

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*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 247

1. Causation

780. In this section, the United States refutes the EU arguments that alleged subsidies to the 787 and 777X cause present serious prejudice to EU interests through technology effects and price effects causal mechanisms.

a. Alleged Technology Effects

781. There is no genuine and substantial causal relationship between U.S. R&D subsidies and the market presence and technologies of the 787 and 777X during the present period. As discussed in Sections III.C-F, the United States has taken compliance steps to substantially alter the nature and scale of Boeing’s aeronautics R&D activities with NASA and DoD, thereby ensuring the WTO consistency of the measures properly before the compliance Panel. In addition, the causal link found by the original panel between NASA and DoD R&D programs and the 787 has not existed for years. Finally, none of the “new” R&D subsidies alleged by the EU has a genuine causal relationship with the technologies, development, or market presence of the 787-8, 787-9, 787-10, or 777X.

i. The EU Fails to Demonstrate Technology Effects through the 787 on the A350 XWB.

782. The EU has failed to demonstrate that the current market presence of the 787, and the alleged “spillover” and “sleeping” effects involving 787 technology, are genuinely and substantially related to the alleged technology effects of U.S. R&D subsidies to the 787. Indeed, the relevant evidence and underlying findings establish that, absent such subsidies, Boeing would have launched the 787 by 2006 at the latest, such that Boeing’s LCA offerings would be no different during the present period.

783. As noted above, the core issue concerning the EU’s 787 technology effects allegations is to determine when the 787 would have been launched absent the U.S. R&D subsidies found by the original panel. The original panel considered it likely that the counterfactual 787 launch would have occurred “significantly later” than 2004.¹¹⁵⁷ It did not specify the length of time that would constitute “significantly later,” but it did indicate that it was less than 11 years: “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.”¹¹⁵⁸

784. The September 2012 compliance deadline fell more than eight years after the actual 787 launch in April 2004. It is implausible to suggest that Boeing could not have launched the 787 in that period absent the original R&D subsidies, in light of Airbus’s experience with the A350 XWB and the original panel’s findings regarding the non-subsidy capacities of Boeing and its

¹¹⁵⁷ *US – Large Civil Aircraft (Panel)*, para. 7.1775; *see also id.*, para. 7.1759 (allowing for the possibility that “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)”).

¹¹⁵⁸ *US – Large Civil Aircraft (Panel)*, para. 7.1748.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 248

suppliers. Indeed, the evidence shows Boeing could have, and would have, launched the 787 well before the compliance deadline.

*(a) The Counterfactual 787 Launch Timing Analysis Should
Be Informed by Airbus’s Rapid Development of the A350
XWB.*

785. A good reference point for considering when the 787 would have been launched without NASA and DoD R&D subsidies is Airbus’s development of the A350 XWB. Before Boeing introduced the 787, Airbus had no near-term plans to replace the A330 with an all-new aircraft, and certainly not a predominately composite aircraft: “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.”¹¹⁵⁹ In response to the 787, Airbus in late 2004 began offering successive iterations of the Original A350, which “fell short of the 787 in terms of technological advancements.”¹¹⁶⁰ Then, in July 2006, Airbus unveiled, and made customer commitments for,¹¹⁶¹ the A350 XWB, which would have a full composite fuselage and is “a technologically-comparable aircraft to the 787.”¹¹⁶² According to the EU and Airbus, it took Airbus only “many months” to design and launch the competitive, composite A350 XWB:

After many months of re-designing and a detailed assessment of the significant challenges to building an all-composite fuselage, on 1 December 2006, Airbus launched the A350XWB, an entirely new aircraft. We believe that this aircraft allows Airbus to offer customers comparable, if not better, performance and operating characteristics as Boeing’s 787.¹¹⁶³

786. Indeed, according to its own engineers, Airbus [[HSBI]]:

[[HSBI]].¹¹⁶⁴

787. This evidence accords with the views of Boeing engineers:

Our conclusion {regarding the 787’s development} is further confirmed by how quickly Airbus was able to launch its first predominantly composite commercial aircraft, the A350 XWB. Like Boeing, Airbus had developed composites

¹¹⁵⁹ *US – Large Civil Aircraft (Panel)*, para. 7.1777.

¹¹⁶⁰ *US – Large Civil Aircraft (Panel)*, para. 7.1778 (quoting EC FWS, para. 1410).

¹¹⁶¹ *Singapore Airlines Orders 20 Airbus A350 XWB-900s and 9 Airbus A380s*, Business Wire (July 21, 2006) (Exhibit USA-291).

¹¹⁶² *US – Large Civil Aircraft (Panel)*, para. 7.1779.

¹¹⁶³ EC Response to the Panel’s First Set of Questions, *US – Large Civil Aircraft (Panel)*, para. 404 (Exhibit USA-290).

¹¹⁶⁴ Statement by Patrick Gavin, Tim Sommer, Burkhard Domke and Dominik Wacht, para. 13 (Nov. 8, 2007) (Exhibit EU-33(HSBI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 249

expertise over decades, generally increasing use of composites in ever larger and more challenging applications with each successive aircraft program. Like Boeing, Airbus was able to leverage the composites experience of its suppliers. Like Boeing, Airbus did not pursue a composite fuselage design until it had a commercial imperative to do so. In Airbus' case, the imperative was to make the A350 a stronger competitor against the 787, and with the A340 in decline, to better compete against the 777. Airbus was able to announce orders for the A350 XWB, with a panelized composite fuselage, in July 2006, a little over two years after Boeing launched the 787, and only months after it had been accepting firm orders for its earlier A350 design. In our view, Airbus' ability to offer the A350 XWB as quickly as it did shows that, with the right incentives, either of the existing large commercial aircraft manufacturers can undertake development of an aircraft with a composite fuselage and then offer that aircraft to customers in a relatively short period of time.¹¹⁶⁵

788. Thus, there is basis for supposing that, absent NASA and DoD subsidies, Boeing would have taken longer than Airbus to bring to market a new, predominately composite twin-aisle aircraft. If Airbus could develop the capabilities necessary to launch the A350 XWB in “many months” [[HSBI]] without U.S. R&D subsidies, it stands to reason that Boeing could as well, given the original panel's findings of Boeing's non-subsidy technological and financial capabilities.

*(b) The Counterfactual 787 Launch Timing Analysis Should
be Informed by the Original Panel's Findings Regarding
the Non-Subsidy Capabilities of Boeing and Its Suppliers.*

789. The original panel rejected the EU's attempts to show that, *but for* the subsidies at issue, Boeing lacked the financial resources to develop the 787 as it did:

{W}e 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.¹¹⁶⁶

790. The original panel also found that a variety of non-subsidy factors contributed to the technology Boeing incorporated in the 787: “Boeing's technology developments are clearly the product of a variety of factors.”¹¹⁶⁷ In particular, it found that Boeing's own experience on aircraft programs dating back to the 1970s gave it an expertise in the use of composite materials and the other relevant technology areas that was unrelated to the alleged aeronautics R&D subsidies:

¹¹⁶⁵ Boeing Engineers Statement, para. 24 (Exhibit USA-283(BCI)).

¹¹⁶⁶ *US -- Large Civil Aircraft (Panel)*, para. 7.1759.

¹¹⁶⁷ *US -- Large Civil Aircraft (Panel)*, para. 7.1758.

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*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 250

- “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.”¹¹⁶⁸
- “Boeing started design of both the 757 and 767 models of LCA in the late 1970s. Boeing used CFRP {Carbon Fiber Reinforced Composites} 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.”¹¹⁶⁹
- “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.”¹¹⁷⁰
- “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. 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.”¹¹⁷¹

791. In addition, the original panel found that Boeing’s suppliers contributed significant resources and technology expertise to the 787 that was unrelated to the subsidies at issue:

- “The {787’s} composite skin is made using AFP {Automatic Fiber Placement} 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.”¹¹⁷²
- “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

¹¹⁶⁸ *US -- Large Civil Aircraft (Panel)*, para. 7.1757.

¹¹⁶⁹ *US -- Large Civil Aircraft (Panel)*, Annex VII.F.1, para. 10.

¹¹⁷⁰ *US -- Large Civil Aircraft (Panel)*, para. 7.1757.

¹¹⁷¹ *US -- Large Civil Aircraft (Panel)*, Annex VII.F.1, para. 10.

¹¹⁷² *US -- Large Civil Aircraft (Panel)*, Annex VII.F.1, para. 23.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 251

composites in primary aircraft structures contemporaneously with Boeing's development efforts.”¹¹⁷³

- “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. 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. 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.”¹¹⁷⁴
- “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. 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. 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. 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.”¹¹⁷⁵

*(c) The Counterfactual 787 Launch Would Have Occurred no
Later than 2006.*

792. In addition to the aforementioned underlying findings and Airbus’s rapid technological progress with the A350 XWB, the United States presents the expert analysis of Boeing engineers who played key roles in developing the 787. In the Boeing Engineers Statement, they assume the original panel’s finding that the 787 launch would have occurred “significantly later than 2004” and proceed to estimate how much additional time it would have taken Boeing.

793. The Boeing engineers begin their analysis by considering two general issues implicated by the original panel’s findings.

¹¹⁷³ US -- *Large Civil Aircraft (Panel)*, para. 7.1757.

¹¹⁷⁴ US -- *Large Civil Aircraft (Panel)*, Annex VII.F.1, para. 24.

¹¹⁷⁵ US -- *Large Civil Aircraft (Panel)*, Annex VII.F.1, para. 25.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 252

794. The first addresses the original panel’s finding that there are “large disincentives for private sector investment in long term, high risk aeronautical R&D.”¹¹⁷⁶ On this point, the Boeing engineers find that such disincentives diminish considerably when commercial pressures create an imperative for near-term advances in aircraft technology:

While the WTO Panel may be correct that commercial enterprises may generally be disinclined to invest in early-stage aeronautics research where the commercial payoff is highly uncertain, distant, and/or difficult to capture – though Boeing does conduct such early-stage research outside of NASA and DoD research contracts – such disincentives diminish significantly where an aircraft manufacturer identifies a compelling need to develop a new product requiring specific attributes that are difficult or impossible to offer using existing technology.

Boeing confronted this situation in the early 2000s, when it determined that (a) a critical priority was developing a new, highly-efficient mid-sized twin-aisle aircraft to replace the 767 and serve anticipated demand for point-to-point long-haul travel, and (b) customers demanded significant breakthroughs in efficiency but were reluctant to pay more than the acquisition cost of the 767 and A330. Under these circumstances, Boeing had ample incentive to, and would, undertake whatever additional early-stage research necessary to augment its ongoing R&D for the 787. This is evident from the risky, early-stage R&D Boeing actually conducted on a number of technologies during the 787 development program, which we discuss below.¹¹⁷⁷

795. Second, they consider generally the time required for early-stage research by Boeing, as compared to similar work conducted by NASA, and find that the Boeing’s independent R&D in a pre-launch development phase progresses “much faster”:

We understand that the WTO Panel considered materials concerning the time required to advance from one NASA Technology-Readiness Level (TRL) to the next, and a study (the Piesen study) that surveyed average time for TRL progress amongst various technology areas.

The time required for a NASA project to advance from one TRL to the next is not indicative of the time required for Boeing to make similar progress in the context of a high-priority aircraft development program. On such a program, Boeing pre- and post-launch R&D activity proceeds at a much faster pace than NASA R&D programs because it is subject to tight deadlines and given much greater

¹¹⁷⁶ See *US – Large Civil Aircraft (Panel)*, para. 7.1759.

¹¹⁷⁷ Boeing Engineers Statement, paras. 9-10 (Exhibit USA-283(BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 253

engineering and budgetary resources to meet those deadlines. We provide a number of examples of this below.¹¹⁷⁸

In addition, Boeing in the early 2000s was working from a much higher knowledge base than in the late 1980s and early 1990s, because of its own unsubsidized experience and advances in knowledge that were disseminated widely throughout the aerospace community (and were available to Airbus as it developed the A350 XWB).

796. The Boeing engineers then analyze the specific 787 technology areas considered by the original panel: (1) composite fuselage; (2) composite wing; (3) aerodynamics and structural design; (4) more-electric architecture; (5) open systems architecture; (6) health management systems; and (7) noise reduction.¹¹⁷⁹ With respect to each, they review the nature and timing of Boeing's key unsubsidized early-stage R&D activities in the pre-launch development phase for the 7E7/787, and then compare it to the nature and timing of ostensibly relevant R&D activity conducted under the U.S. R&D programs considered by the original panel. Using this approach, the Boeing engineers provide the best possible estimate of the additional time that would be required before the 787 could be launched under a but-for-the-subsidies counterfactual scenario.

797. Most notable is their analysis of Boeing's independent R&D work on the 7E7/787 composite fuselage as compared to activities under the NASA ATCAS program that were central to the original panel's technology effects analysis:

In [BCI] a one-piece composite barrel design was [BCI] in April 2004, Boeing officially launched the 787. In other words, in the [BCI] In terms of the scope, scale and complexity of the work and technological challenges involved, the work Boeing did under ATCAS pales in comparison. Therefore, we are being conservative when we state that, starting in late 2002, Boeing could have replicated its work under the ATCAS program within two years.¹¹⁸⁰

798. Their analysis is similar with respect to the other technology areas, such as the following:

- **Composite wing**

We are aware of the allegation that our 787 wing work benefited from the composite wing element of NASA's AST program, which over the course of 5 years involved the construction and study of a semi-span composite wing demonstrator using a stitched/resin filled infusion technology supplied by Cincinnati Milacron. This demonstrator [BCI] Nevertheless, to the extent that a construction and testing of an AST-type wing box demonstrator would have been

¹¹⁷⁸ Boeing Engineers Statement, paras. 11-12 (Exhibit USA-283(BCI)).

¹¹⁷⁹ Boeing Engineers Statement, paras. 13-40 (Exhibit USA-283(BCI)); *see also US – Large Civil Aircraft (Panel)*, Annex VII.F.1, paras. 27-78.

¹¹⁸⁰ Boeing Engineers Statement, para. 23 (Exhibit USA-283(BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 254

necessary to develop a composite wing for the 787, Boeing would have done so. We estimate such work would have taken us approximately 18 months, which is conservative in light of the [BCI].¹¹⁸¹

- **Aerodynamics and structural design**

If, at the outset of the intensive pre-launch product development activities on the Sonic Cruiser and 7E7 in 2000, Boeing found that it needed to do additional in-house work to evaluate and better understand with the generic TRANAIR and OVERFLOW codes, it would have done so. And it would have done so at a much faster pace than occurred under NASA programs. The pace of such work is largely a function of computing capacity and staffing resources, both of which are in much greater supply on near-term product development initiatives such as the 7E7. By way of illustration, under the Integrated Wing Design element of NASA Advanced Subsonic Technology program, one Boeing employee worked part-time for 3 years to assess the TRANAIR and OVERFLOW generic (publicly available) codes. Had Boeing done this work on its own with the level of resources that were available in the 7E7 program, it would have taken approximately 6 months. The Boeing proprietary versions of TRANAIR and OVERFLOW have been substantially modified and validated since that time.¹¹⁸²

- **More-electric architecture**

[BCI]

However, because Boeing was serious about bringing a new aircraft to market, [BCI]¹¹⁸³

799. Overall, the Boeing engineers “conclude that, under the WTO Panel’s assumption that the 787 would have been delayed absent Boeing’s participation in the NASA and DoD programs, Boeing would have (a) conducted all the necessary research to develop, launch, and produce the 787, and (b) been in a position to launch the 787 in 2006, with promised deliveries starting in 2010 if Boeing had not participated in the NASA and DoD programs that the WTO found to provide subsidies.”¹¹⁸⁴ Accordingly, the 787-8 and 787-9 (which were actually launched simultaneously in 2004), and their technologies, would have been available to customers and other Boeing LCA development programs (such as the 787-10, 777X and 737 MAX) well in advance of both the September 2012 compliance deadline. Thus, there is no genuine and substantial causal link to support the EU’s claims of present adverse effects related to alleged original subsidy technology effects, spillover effects, and sleeper effects on 787 family LCA.

¹¹⁸¹ Boeing Engineers Statement, para. 27 (Exhibit USA-283(BCI)).

¹¹⁸² Boeing Engineers Statement, para. 30 (Exhibit USA-283(BCI)).

¹¹⁸³ Boeing Engineers Statement, para. 33-34 (Exhibit USA-283(BCI)).

¹¹⁸⁴ Boeing Engineers Statement, para. 41 (Exhibit USA-283(BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 255

*(d) The EU Has Failed to Demonstrate 787 Technology
Effects Arising After 2007.*

800. The EU also alleges post-2007 technology effects in two technology areas related to the 787 that supposedly arise in the form of “sleeper effects” and “new subsidy effects.”

801. First, the EU contends that Boeing’s use of radio-frequency identification (“RFID”) technologies on the 787 is enabled by Boeing’s pre-2007 participation in the NASA R&T Base program and several DoD RDT&E Program Elements,¹¹⁸⁵ and by validation of this technology through the FAA 2012 CLEEN ecoDemonstrator program.¹¹⁸⁶ The Boeing engineers explain why these arguments are baseless:

Boeing [BCI] RFID devices [BCI] None of these efforts were enabled by U.S. R&D programs. Indeed, Mr. Domke of Airbus only asserts that one such program – the FAA CLEEN 2012 ecoDemonstrator program – actually involved RFID technology, and even this is erroneous. Boeing’s testing of RFID on the ecoDemonstrator 737-800 test bed was not under a CLEEN contract.¹¹⁸⁷

802. Second, the EU alleges that the 787-9 benefits from “additional testing and validation of” hybrid laminar flow control technology under NASA’s ERA and Subsonic Fixed wing projects.¹¹⁸⁸ This too is erroneous:

Boeing did not use Boeing/NASA 8-ft Cross Flow Suction experiment test results for the 787 HLFC Tail System, and HLFC was not tested under FAA’s CLEEN program. Rather, Boeing developed the 787 HLFC Tail System technology using internal funding and publicly available material that was simultaneously available to Airbus, including the publicly disclosed results of U.S. Government-funded tests and projects.¹¹⁸⁹

(e) Conclusion

803. In sum, the EU’s technology effects arguments fail to demonstrate that U.S. R&D subsidies found by the original panel presently have a genuine and substantial causal relationship with the technologies and market presence of the 787-8, 787-9, and/or 787-10.

¹¹⁸⁵ EU FWS, para. 1085-1086.

¹¹⁸⁶ EU FWS, para. 1103.

¹¹⁸⁷ Boeing Engineers Statement, para. 39 (Exhibit USA-283(BCI)).

¹¹⁸⁸ EU FWS, para. 1103.

¹¹⁸⁹ Boeing Engineers Statement, para. 31 (Exhibit USA-283(BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 256

ii. *The EU Fails to Demonstrate Technology Effects through the 777X
on the A350 XWB.*

804. The EU also asserts that U.S. R&D programs have technology effects on Boeing’s proposed 777X derivative of its 777 family LCA, resulting in present threats of significant price suppression and significant lost sales.¹¹⁹⁰ According to the EU, these technology effects arise as original 787 subsidy “spillover”¹¹⁹¹ and “sleeper” effects,¹¹⁹² and from new subsidy effects.¹¹⁹³ These arguments fail.

805. The 777X is a proposed family of large twin-aisle LCA derived from Boeing’s current 777 family. Boeing has yet to launch the 777X, [BCI].¹¹⁹⁴ The Boeing engineers provide helpful background on Boeing’s development of the 777X:

[BCI]¹¹⁹⁵

806. The EU asserts that alleged subsidies to the 777X presently threaten to cause significant price suppression and significant lost sales for the A350 XWB within the meaning of Article 6.3(c) of the SCM Agreement. As noted in Section IV.B.3, however, *the EU fails to assert, much less demonstrate, that the 777X is in the “same market” as required by Section 6.3(c).* While the EU asserts in its introductory comments that the 777X is in the same market as the A350 XWB,¹¹⁹⁶ this statement cites to another section of its first written submission where the EU argues that “{t}he new technology 787 and A350XWB compete in a single product market, separate from the other twin-aisle aircraft discussed above.”¹¹⁹⁷ Therefore, the EU has failed as a matter of law to establish its claims of present adverse effects regarding the 777X.

807. Further, while the EU characterizes the 777X as an imminent threat to the A350 XWB, Airbus itself does not appear to share this view. As recently as June 2013, Airbus Chief Operating Officer – Customers John Leahy dismissed the 777X as a “paper airplane,” and cited production capacity constraints, not the 777X, as the reason why sales of the A350 XWB-1000 [BCI] are not higher:

“We’re not at all worried about the 777X. They are known for their paper airplanes. No one seems to remember that they already not just marketed but sold 777-200s with folding wings, and of course none was produced. No one seems to

¹¹⁹⁰ EU FWS, paras. 1316, 1555.

¹¹⁹¹ EU FWS, paras. 1066-1068, 1070-1072.

¹¹⁹² EU FWS, paras. 1075-1081.

¹¹⁹³ EU FWS, paras. 1100-1102.

¹¹⁹⁴ Boeing Engineers Statement, para. 71 (Exhibit USA-283(BCI)).

¹¹⁹⁵ Boeing Engineers Statement, para. 72 (Exhibit USA-283(BCI)).

¹¹⁹⁶ EU FWS, para. 800.

¹¹⁹⁷ EU FWS, paras. 923-926.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 257

remember the ‘game-changing’ Sonic Cruiser, which of course was a joke. No one seems to remember the 747-500, the 747-600 or the 787-3. The Japanese remember the 787-3, which {Boeing} sold with legally binding contracts and just never delivered.

“Yeah, they’re worried about the A350-1000, and they’ve come out with one paper airplane after another and declaring victory, declaring that the world is beating a path to their door. Naw. It’s BS. It’s typical Boeing marketing hype.”

...

Leahy repeated previous statements that he could sell a lot more A350-1000s if he had the production slots.

*“We could substantially increase sales for the A350-1000 if we could substantially increase production. I need a second line, a dedicated line and we’re debating that internally. We’re doing the business case. I’m confident we can make that decision before the end of the year.”*¹¹⁹⁸

808. In light of Airbus’s assessment of the 777X, it is hard to see how the EU could claim that alleged R&D subsidies to the 777X cause technology effects resulting in serious prejudice. In fact, no such effects exist, as the United States demonstrates below.

(a) Alleged Original Subsidy “Spillover Effects” from the 787 to the 777X

809. The EU fails to show that effects from the NASA ACT and AST programs and DoD RDT&E on the F-22, A-6, B-2, and JSF programs have enabled Boeing’s development of the 777X’s composite wings, or that NASA’s HSR and Aviation Safety programs have enabled the 777X’s hardware and software.¹¹⁹⁹

810. First, the EU does not demonstrate that the cited effects from DoD RDT&E programs come from assistance instruments (some of which were found to be subsidies in the underlying proceeding) rather than procurement contracts (which were not). The EU also fails to account for the fact that most of these programs it cites are, from a technology perspective, quite old. The A-6 is a 1960s-era aircraft, retired in the 1990s. The B-2 and F-22 are 1990s aircraft, with the critical advances being use of stealth technology. ACT ended in the mid-1990s. The whole point of the 777X program is to *replace* technology from that era to reflect developments *since* that time. HSR and AST are more recent, but as the discussion of the development of the 787 and A350 XWB demonstrates, any commercially relevant technologies from those programs are

¹¹⁹⁸ *Wide-Body Airplanes Get Plenty of Attention at IATA; Leahy Comments on 777X, A350 and A380*, Leeham News and Comment (June 3, 2013) (Exhibit USA-289) (emphases added).

¹¹⁹⁹ *Cf.* EU FWS, paras. 1066-1068, 1070-1072.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 258

now widely available to Boeing (and Airbus) independent of what had been WTO-inconsistent subsidies.

811. Moreover, while the 777X's current wing and systems designs share some similarities with those of the 787 (along with notable differences), these are not effects of the R&D programs found to be subsidies to the 787. As noted above, absent those subsidies, the 787 would have been launched by 2006 at the latest. As the Boeing engineers observe, “{t}his would have given Boeing more than enough time to adapt elements of the 787's wing design and systems to the 777X, since work on the 777X began in earnest in [BCI]”¹²⁰⁰

(b) Alleged Original Subsidy Sleeper Effects – Folding Wing Tip

812. The EU alleges that Boeing would have been unable to develop the 777X with a folding wing tip (“FWT”) if it had not worked under contract with the DoD to improve to the A-6E Intruder attack aircraft.¹²⁰¹ Again, the EU does not substantiate the legal predicate for this allegation – *i.e.*, that the relevant Boeing work on the A-6E occurred under an assistance instrument rather than a non-subsidy procurement contract. In any event, the EU's allegation is misplaced as a factual matter. As the Boeing engineers state:

[BCI]

In sum, the 777X FWT and A-6E folding wing are very different designs, and at no point in the development of the 777X FWT did Boeing refer to the A-6E folding wing, whether as a useful baseline design or as a lesson in what not to do.¹²⁰²

(c) Alleged Original Subsidy “Sleeper Effects” and New Subsidy Effects – [[HSBI]]

813. Finally, the EU contends that Boeing's work under the NASA R&T Base, Subsonic Fixed Wing, and ERA programs and the FAA CLEEN ecoDemonstrator program enabled it to [[HSBI]].¹²⁰³ These allegations are unfounded, as Boeing engineers explain:

[BCI] As described above, all of this HLFC work was performed under Boeing internal funding or through publicly available material. Boeing did not use Boeing/NASA 8-ft Cross Flow Suction experiment test results for the 787 HLFC Tail System or for the 777X, and HLFC was not tested under FAA's CLEEN program.¹²⁰⁴

¹²⁰⁰ Boeing Engineers Statement, para. 76 (Exhibit USA-283(BCI)).

¹²⁰¹ EU FWS, para. 1075-1081.

¹²⁰² Boeing Engineers Statement, paras. 80-81 (Exhibit USA-283(BCI)).

¹²⁰³ EU FWS, paras. 1075-1081, 1100-1102.

¹²⁰⁴ Boeing Engineers Statement, para. 83 (Exhibit USA-283(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 259

(d) Conclusion

814. In sum, the EU has failed to demonstrate that alleged U.S. R&D subsidies have technology effects on the 777X. Absent the alleged subsidies, Boeing’s development and design of the 777X would be unchanged.

b. Alleged Price Effects

815. The EU fails to undertake any detailed showing of a price-based causal mechanism through which subsidies to the 787 have a genuine and substantial relationship of cause and effect with market phenomena laid out in Article 6.3.¹²⁰⁵ Instead, it merely refers back to its price causal mechanism section, which discussed the three separate aggregated groups of subsidies, but provided no analysis of any of those groups that was specific to the 787 or the A350 XWB.¹²⁰⁶ As an initial matter, this is insufficient to make out a *prima facie* case that the subsidies alleged to benefit the 787 are causing adverse effects through a price causal mechanism.¹²⁰⁷

816. In any event, a more thorough analysis of the three aggregated groups of subsidies specific to the EU’s “new technology twin-aisle market” demonstrates that there is no price-based causal link between the subsidies and the adverse effects alleged by the EU.

817. **R&D subsidies.** As explained in Section IV.C, the EU improperly seeks to re-litigate the unappealed finding that price effects cannot be attributed to alleged R&D subsidies that are also alleged to have technology effects.

818. **Tied tax subsidies.** The magnitude of the tied tax subsidies to the 787 is simply too small to be a substantial cause of adverse effects, particularly when viewed in the context of the particular subsidies, products, and markets at issue here.¹²⁰⁸ The EU’s generalized assessment of the price effects attributable to tied tax subsidies is based on an aggregated group that includes FSC/ETI, the Washington State and City of Everett B&O tax rate reductions, and the South Carolina income allocation and apportionment agreement with Boeing.¹²⁰⁹ As explained in Section III.H, the FSC/ETI scheme has been withdrawn, and Boeing has not received FSC/ETI benefits since at least 2006. It is also worth noting that, even if FSC/ETI had not been withdrawn, the EU did not allege FSC/ETI subsidies to the 787 in the original proceeding.¹²¹⁰ It cannot be permitted to now assert for the first time in this compliance proceeding that FSC/ETI benefits any 787 ordered before 2006 and sold for use outside of the United States.¹²¹¹

¹²⁰⁵ See EU FWS, paras. 1223-1225.

¹²⁰⁶ See EU FWS, paras. 1112-1192, 1223.

¹²⁰⁷ See EU FWS, paras. 1223, 1626, 1842.

¹²⁰⁸ See *US – Large Civil Aircraft (AB)*, para. 1193.

¹²⁰⁹ EU FWS, para. 1132.

¹²¹⁰ *US – Large Civil Aircraft (AB)*, note 2341.

¹²¹¹ EU FWS., para. 1135.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 260

Furthermore, as explained in Sections III.K.3.a and III.K.4.a, the South Carolina apportionment agreement is not properly within the scope of this compliance proceeding.¹²¹²

819. The remaining two tied tax subsidies – Washington and Everett¹²¹³ B&O tax reductions – were in fact analyzed on an aggregated basis by the original panel with respect to the 787, where it determined that they were not “of a magnitude that would enable them, on their own,” to cause adverse effects.¹²¹⁴ The EU did not appeal the original panel’s finding that these two subsidies *on their own* were not a genuine and substantial cause of serious prejudice through price effects on the 787.¹²¹⁵ In any event, the EU should not be able to re-litigate this question again in a compliance proceeding, having already not prevailed in the original proceeding, which is exactly what the situation would be once FSC/ETI and the South Carolina apportionment agreement are removed from the analysis.

820. And even if this compliance Panel did repeat the analysis, the result would be the same. The Washington data show that Boeing’s average annual amount saved from the Washington B&O tax rate reduction from 2007-2012 was \$[BCI].¹²¹⁶ And even the EU’s inflated numbers for the Everett B&O tax reduction – which is not subject to recommendations and rulings of the DSB and is therefore not properly before this Panel – equal an average annual savings to Boeing for 2007-2012 of only \$[BCI].¹²¹⁷ This would be a total annual savings to Boeing of \$[BCI].¹²¹⁸ An assessment of the magnitude of these subsidies in the proper context shows that they are incapable of causing price effects that result in serious prejudice.

821. The EU’s theory is that these tied tax subsidies allow Boeing to lower its prices of 787s while maintaining the profitability of the sale.¹²¹⁹ First, to take a conservative approach, assume that Boeing’s tied tax subsidies were only used to lower prices in campaigns that the EU has alleged as lost sales in this compliance proceeding. Thus, every other sale of a 787 between 2007 and 2012 is ignored, despite the fact that the EU has framed the effect of the subsidies as a reduction in marginal unit cost, which presumably would be distributed across all 787 sales.

¹²¹² The United States notes that even if the South Carolina income allocation and apportionment agreement with Boeing were within this Panel’s terms of reference, the outcome would remain the same.

¹²¹³ The Everett B&O tax rate reduction is not covered by the DDSB’s recommendations and rulings and cannot be considered anew here.

¹²¹⁴ *US – Large Civil Aircraft (Panel)*, paras. 7.254, 7.302, 7.1824.

¹²¹⁵ The EU did appeal the finding to the extent that the panel did not undertake an assessment of the collective effects of the R&D subsidies and the B&O tax rate reductions in the 200-300 seat market. As explained in Section IV.F.3, the EU did not request that the Appellate Body complete the analysis on this issue and therefore cannot pursue that line of argument in this compliance proceeding.

¹²¹⁶ Washington State Tax Information (Exhibit USA-264(BCI)).

¹²¹⁷ EU Summary of Subsidies to Boeing’s LCA Division, p. 2 (Exhibit EU-35).

¹²¹⁸ Rounding up for the first two figures results in \$0.1 million difference between the total amount and the sum of the first two figures.

¹²¹⁹ EU FWS, para. 1118.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 261

This also means that, where (according to the EU) Boeing allocated some of the savings to offers that were rejected in favor of Airbus competing products (*i.e.*, the basis for the EU’s price suppression claims), Boeing is assumed to be able to reallocate those savings to other campaigns. Even under these very conservative assumptions, the lost sales claims made by the EU incorporate at least 347 787s sold between 2007 and 2012, or 58 per year.¹²²⁰

822. The EU’s lost sales claims in this compliance proceeding alone also incorporate at least 1,057 sales of the 737 MAX and 410 sales of the 737NG.¹²²¹ Thus, an extremely conservative approach would have Boeing allocating the \$[BCI] of annual savings from the Washington B&O tax rate reduction over 1,830 aircraft, or 305 per year, which works out to about \$[BCI] per aircraft. Again being conservative, assume that all \$[BCI] in annual savings from the Everett B&O tax rate reduction is within the scope of this dispute and is allocated to the 787, which works out to about \$[BCI]. The two subsidies combined account for about \$[BCI] per aircraft.¹²²²

823. The list price for a 787 is over \$200 million, and the average 787 net price for the sales the EU identified for the Panel’s Article 13 request was \$[[HSBI]].¹²²³ Thus, the two subsidies combined represent just [[HSBI]] percent of the \$[[HSBI]] average net 787 purchase price using data from the campaigns identified by the EU for the Panel’s Article 13 request.¹²²⁴ Of course, if more were allocated to some campaigns, that would leave even less to be allocated to others. This is not meant to be a precise calculation, but it leaves no doubt that the magnitude of the subsidies at issue is not in the vicinity of what would be necessary to have a substantial relationship with the alleged market phenomena through the lowering of 787 prices.

824. Accordingly, the EU’s suggestion that the tied tax subsidies cause adverse effects in its “new technology twin-aisle market” fails.

825. **Miscellaneous subsidies.** The EU has failed to demonstrate that the miscellaneous subsidies to the 787 have a genuine and substantial causal relationship with the alleged adverse effects. The EU’s generalized assessment of the price effects attributable to the miscellaneous subsidies (*i.e.*, those that are not R&D subsidies and are not tied tax measures) is based on an aggregated group that includes: (i) City of Wichita IRBs; (ii) Washington untied tax breaks and incentives (*i.e.*, B&O tax credits for preproduction development and property taxes, sales and use

¹²²⁰ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI).

¹²²¹ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI).

¹²²² See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI).

¹²²³ See EU FWS, para. 610 (listing price of \$193.5 million of 787-8 and \$227.8 million for 787-9); Information Responding to Panel Question 87, parts (c) and (f) (Exhibit USA-294(HSBI)).

¹²²⁴ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 262

tax exemptions for computer hardware, software, and peripherals and B&O tax credits for leasehold excise taxes on property and buildings leased from the Washington government and used to manufacture airplanes); (iii) Washington funding and facilities support through the JCATI; and (iv) South Carolina packages of tax, infrastructure, training, and other subsidies through Projects Gemini and Emerald.¹²²⁵

826. As an initial matter, the EU does not even allege that the Wichita IRBs or the JCATI affect 787 pricing.¹²²⁶ In addition, as explained in Sections III.K.3.a and III.K.4.a, the South Carolina subsidies are outside the scope of this compliance proceeding and are therefore not even candidates for aggregation.¹²²⁷

827. This leaves only the Washington untied tax subsidies, which were not subject to recommendations and rulings of the DSB. However, even if they had been, the EU effectively acknowledges that they can only cause adverse effects if, as with Wichita IRBs in the original proceeding, their effects are cumulated with other subsidies' effects.¹²²⁸ However, as discussed above, the tied tax subsidies are not a substantial cause of any adverse effects in the EU's 787/A350 XWB market. Therefore, there is no anchor group of subsidies for the Washington untied tax measures to complement and supplement. Accordingly, even if they had been subject to recommendations and rulings of the DSB, they cannot be found to cause adverse effects in this compliance proceeding.

2. *The EU Fails to Demonstrate Significant Price Suppression with Respect to the A350 XWB.*

828. The EU alleges that subsidies to the 787 and 777X have significantly suppressed prices for the A350 XWB, and asserts that the evidence of price suppression lies in three areas: (1) conversion of Original A350 orders to A350 XWB orders at suppressed prices; (2) general trends in prices for the A350 XWB; (3) information from specific sales campaigns.¹²²⁹ Each argument fails.¹²³⁰

829. First, the EU's claim of present price suppression after the compliance deadline is unsupported by the requisite causal link, whether under its technology effects theory or its price effects theory. As the United States demonstrates above, the 787, and its technology, would have been available to customers well before the compliance deadline absent the alleged

¹²²⁵ EU FWS, para. 1155.

¹²²⁶ See EU FWS, paras. 1164, 1168.

¹²²⁷ The United States notes that even if the South Carolina apportionment agreement were within this Panel's terms of reference, the outcome would remain the same.

¹²²⁸ See EU FWS, paras. 1174-1175.

¹²²⁹ EU FWS, paras. 1275-1276, 1291.

¹²³⁰ The United States has already addressed in Section IV.G the EU's failure to make a *prima facie* case with respect to its claim that subsidies to the 787 have caused significant suppression of A330 prices.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 263

subsidies, such that there can be no present subsidy technology effects. Regarding price effects, the magnitude of the alleged subsidies that could properly be considered, when properly calculated and then measured under conservative assumptions, is grossly insufficient to be a genuine and substantial cause of significant price suppression.

830. Second, the EU is precluded from arguing that A350 XWB prices were suppressed because Original A350 prices had been suppressed by the effects of subsidies to the 787. The original panel has already considered this argument and rejected it, finding that the EU had not supported its claim with sufficient evidence or argument:

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. The European Communities asserts that {***}. 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. 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.¹²³¹

831. The EU did not appeal these findings. Instead, it takes them as an invitation to reargue the issue before the compliance Panel and to proffer evidence where before it chose not to.¹²³² The Panel should reject this attempt by the EU to take a second change at making out its case.

832. And the EU's argument bears the same flaw identified by the original panel. The EU has failed to demonstrate Airbus had "no other option" but to convert Original A350 orders into

¹²³¹ *US – Large Civil Aircraft (Panel)*, para. 7.1793.

¹²³² *See* EU FWS, para. 1286.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 264

“price-suppressed future A350XWB deliveries.”¹²³³ The EU itself identifies alternatives when it indicates that [[**HSBI**]].¹²³⁴

833. Third, the available price trend data disproves the link the EU seeks to draw between pricing for the 787 and the A350 XWB.

834. Before reaching the merits of this issue, the United States notes that the EU failed to comply with the Panel’s Article 13 request for order price information. Question 6 of the Panel’s request asked for “average pricing information for each of the Airbus . . . A350 XWB-800, A350 XWB-900, and A350 XWB-1000,” yet the EU chose to provide A350 XWB order pricing data on an aggregated family basis.¹²³⁵ The EU’s disregard of the Panel’s question limits the ability of the Panel, and the United States, to analyze the degree to which trends in prices for the A350 XWB-800 – the model closest in size to the 787 – differs from those of the larger A350 XWB-900 and -1000.

835. Nevertheless, the available data fail to support, and in some cases contradict, the EU’s price suppression claim. The chart below presents the U.S. indexed average net order prices for the 787, as well as its estimate of the A350 XWB data provided by the EU (which did not include the actual index values reflected in its charts)¹²³⁶:

787 and A350 XWB Indexed Average Net Order Prices¹²³⁷

[**BCI**]

836. First, the A350 XWB price data for 2006-2008 [**BCI**] The EU wrongly attempts to explain this trend as a by-product of link its Original A350 order conversion argument to the price trend data.¹²³⁸

837. Second, and most important, the respective trends for the 787 and A350 XWB [**BCI**] Over the 2008-2010 period, 787 prices [**BCI**] The EU contends that 2008 was a year in which

¹²³³ Cf. EU FWS, para. 1278.

¹²³⁴ See EU FWS, para. 1285.

¹²³⁵ See EU Responses to Article 13 Questions (Feb. 28, 2013), Question 6; see also EU FWS, para. 1286.

¹²³⁶ The United States also notes that the A350 XWB pricing information submitted by the EU may be distorted. In the base year for the EU/Airbus indexing, 2006, the Ascend database shows only a single A350 XWB aircraft was ordered. Ascend database (Apr. 2013) (Exhibit USA-287). If the data provided by the EU is also based on such a small sample, the index data are unlikely to provide an accurate picture of price trends.

¹²³⁷ Sources: Indexed Average Net Order Prices for Boeing LCA, Boeing (Exhibit USA-288(BCI)); Price and Price Per Seat Evolution of Net Order Intakes of A330, A320ceo, and A350 XWB family LCA, Airbus (Exhibit EU-690(BCI)). proprietary presentation,

¹²³⁸ See EU FWS, para. 1287.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 265

“Boeing temporarily lost some of its competitive advantage” because of 787 delivery delays,¹²³⁹ but [BCI]. Order data are presented below.

787 and A350 XWB Order Volume and Share¹²⁴⁰

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Boeing 787 Orders	52	198	100	285	59	24	36	45	50
Boeing 787 Share	100.0%	100.0%	99.0%	50.6%	30.3%	47.1%	29.8%	77.6%	55.6%
Airbus A350 XWB Orders	0	0	1	278	136	27	85	13	40
Airbus A350 XWB Share	0.0%	0.0%	1.0%	49.4%	69.7%	52.9%	70.2%	22.4%	44.4%
Total 787/XWB Orders	52	198	101	563	195	51	121	58	90
Annual Change in Total	-	281%	-49%	457%	-65%	-74%	137%	-52%	55%

838. The EU contends that, starting in 2010, “{t}he 787 reasserted its subsidy-driven competitive advantage and aggressive pricing, as reflected in the sales campaigns below {in the EU first written submission},”¹²⁴¹ but the data tell a much different story. From 2010 to 2011, 787 prices [BCI]. Thus, the pricing data contradict the EU’s price effects arguments, including its campaign-specific arguments.¹²⁴² If something was [BCI].

839. The EU’s attempt to link price trends to the 787’s production delays is illuminating nonetheless, since it is a concession that the hypothesized technology and price effects of the alleged subsidies can be reduced by non-subsidy factors. While 787 price movements cannot explain [BCI ¹²⁴³], as Airbus’s Christophe Mourey observes, delivery delays can increase the attractiveness of other aircraft.¹²⁴⁴

¹²³⁹ EU FWS, para. 1294.

¹²⁴⁰ Ascend database (Apr. 2013) (Exhibit USA-287). The United States here does not refer to “market” share because the United States disagrees with the EU that the 787 and A350 XWB do not compete in the same market with other LCA models.

¹²⁴¹ EU FWS, para. 1295.

¹²⁴² Cf. EU FWS, paras. 1299-1314.

¹²⁴³ Nearest Possible Date for a Delivery Position, Airbus (Exhibit USA-286(BCI)).

¹²⁴⁴ Statement on Current Competitive Conditions in the LCA Industry, Christophe Mourey, Airbus, paras. 39, 50 (Mar. 27, 2013) (Exhibit EU-34(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 266

840. Further, the EU’s references to specific sales campaigns¹²⁴⁵ fail to support its price suppression claim because the EU has failed to show that the availability, technology, and pricing of the 787 were caused by the alleged subsidies, as the United States demonstrates below.

841. Related to the effects of non-subsidy factors is the EU’s failure to establish that the alleged price suppression is “significant” within the meaning of Article 6.3(c) of the SCM Agreement. The EU’s approach on this point is confined to repeating the terms “significant” and “significantly”¹²⁴⁶ without demonstrating why any price suppression should be considered significant. This is inadequate to make out a claim under Article 6.3(c) and provides an independent basis on which to reject the EU’s claims.

3. The EU Fails to Demonstrate Threat of Significant Price Suppression with Respect to the A350 XWB.

842. The EU alleges that prices for the A350 XWB are presently threatened with significant price suppression from the effects of subsidies through the 787-10 (which launched in June 2013) and the 777X (which [BCI]).¹²⁴⁷ However, as the United States demonstrated above, the entry of these derivative aircraft into the market is not a result of any subsidy technology effects, and any unwithdrawn subsidies that could be considered in a price effects analysis would be too small to cause significant price suppression.

843. Moreover, the EU fails to meet the requirements of a threat claim. Referring to Article 15.7 of the SCM Agreement as relevant guidance, the Appellate Body in *EC – Large Civil Aircraft* stated that a determination of threat of serious prejudice must “‘be based on facts and not merely allegation, conjecture or remote possibility’ and that ‘{t}he change in circumstances’ that would create a situation in which the subsidy would cause {serious prejudice} ‘must be clearly foreseen and imminent.’”¹²⁴⁸ In evaluating the underlying panel’s finding of a threat of displacement based on aircraft order data for the Indian single-aisle market, the Appellate Body overturned the panel’s threat finding, even though the record contained actual order data proffered as evidence of what delivery trends would be like in the future.¹²⁴⁹ This indicates that a threat claim may fail even when it is based on hard data.

844. Here, all the EU offers are general assertions about the impact that the 787-10 and 777X will have¹²⁵⁰ – *i.e.*, “allegation” and “conjecture.” If, as discussed above, the EU cannot show present serious prejudice when hard data are available, it cannot use the same general technology and price effects theories to establish a threat of price suppression, much less a threat of

¹²⁴⁵ See EU FWS, paras. 1305, 1311.

¹²⁴⁶ See, *e.g.*, EU FWS, paras. 1297, 1306, 1307.

¹²⁴⁷ EU FWS, paras. 1316-1328; *see also* Boeing Engineers Statement, para. 71 (Exhibit USA-283(BCI)).

¹²⁴⁸ *EC – Large Civil Aircraft (AB)*, para. 1171.

¹²⁴⁹ *EC – Large Civil Aircraft (AB)*, para. 1171.

¹²⁵⁰ *Cf.* EU FWS, paras. 1316-1328.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 267

“significant” price suppression. Moreover, based on the EU’s allegations and the statement of Airbus’s Mr. Mourey,¹²⁵¹ Airbus is certainly aware of the 787-10 and 777X. Yet the EU has not presented any evidence from Airbus that would provide facts to substantiate its threat allegations. If the 787-10 and 777X were the “imminent” threat to the A350 XWB that the EU makes them out to be, Airbus presumably would be able to provide specific details as to how that threat can be discerned. Yet all Mr. Mourey has to say is, “Boeing has decided instead to counter the A350XWB with a new technology solution: the launch of the 777X.”¹²⁵² Accordingly, the Panel should reject this threat claim.

4. *Alleged Significant Lost Sales*

845. The EU alleges that the subsidies to the 787 presently cause the A350 XWB to experience significant lost sales in three forms: (a) undelivered orders from lost sales found in the original proceeding; (b) orders associated with alleged lost sales claims *that were rejected by the original panel*; and (c) new lost sales.

846. None of these arguments demonstrate that the alleged subsidies presently cause significant lost sales. As shown above, the EU has failed generally to support its technology effects and price effects causation theories. Indeed, absent the alleged subsidies, the 787 would have been in the market well before the compliance deadline. Thus, there can be no finding of a causal link between the alleged subsidies and the outcomes in the sales identified by the EU. In addition, there are jurisdictional and/or substantive flaws in each of the EU’s sales-specific arguments, as demonstrated below.

a. Original Proceeding Lost Sales

i. Qantas

847. The EU alleges that 15 orders of the 787 by Qantas that were allegedly outstanding at the end of 2012 represent lost sales.¹²⁵³ (Qantas ordered 45 787s in 2005 and another 20 subsequently). The EU relies on the finding in the original proceeding that Qantas’s 2005 order of 45 787s was a lost sale for the purposes of Article 6.3 of the SCM Agreement.¹²⁵⁴ What the EU fails to mention is that the sale was found to be a lost sale of Original A350s.¹²⁵⁵ The EU has not alleged in this compliance proceeding that U.S. subsidies are causing adverse effects in the form of lost sales of the A330 or the Original A350. Moreover, having been found to be a lost sale of the A330 or Original A350, the 2005 Qantas sale certainly cannot be a lost sale of A350 XWBs.

¹²⁵¹ See Mourey Statement, para. 121 (Exhibit EU-34(BCI)).

¹²⁵² Mourey Statement, para. 121 (Exhibit EU-34(BCI)).

¹²⁵³ EU FWS, para. 1340.

¹²⁵⁴ EU FWS, para. 1340.

¹²⁵⁵ See *US – Large Civil Aircraft (AB)*, paras. 1054-1055.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 268

848. Furthermore, as the EU acknowledges, the 2007 order “flow{s} from the 2005 order.”¹²⁵⁶ Thus, the 2007 sale was not due to lower pricing caused by subsidies. It was a result of the 2005 sale. Because the 2005 sale was unequivocally not a lost sale of A350 XWBs, the consequential 2007 lost sale claim also fails.

849. The EU also claims that the subsidies cause a threat of significant lost sales to the extent Qantas continues to retain options and purchase rights. The EU’s sole piece of evidence is an article titled, “Qantas May Take 787-9s in 2016 Despite Cancellations.”¹²⁵⁷ The article makes clear that the exercise of options is uncertain and depends on whether Qantas’s financial outlook turns around.¹²⁵⁸ Thus, the EU’s claim is based entirely on allegation and conjecture. Because the serious prejudice allegedly threatened is not clearly foreseen and imminent, the EU’s claim fails.¹²⁵⁹

ii. Ethiopian Airways

850. The EU alleges that 6 outstanding orders from 10 787s ordered by Ethiopian Airways in 2005 represent a lost sale.¹²⁶⁰ Again, this sale was found in the original proceeding to be a lost sale of A330s or Original A350s.¹²⁶¹ The EU has not alleged in this compliance proceeding that U.S. subsidies are causing adverse effects in the form of lost sales of the A330 or the Original A350. Moreover, having been found to be a lost sale of the A330 or Original A350, the 2005 Ethiopian Airways sale certainly cannot be a lost sale of A350 XWBs.

851. The EU also claims that the subsidies cause a threat of significant lost sales to the extent Ethiopian Airways continues to retain options and purchase rights that flow from the 2005 order.¹²⁶² The EU has presented no evidence that any options or purchase rights even exist, much less that they will be exercised. Thus, the EU’s claim is based entirely on allegation and conjecture. Because the serious prejudice allegedly threatened is not clearly foreseen and imminent, the EU’s claim fails.¹²⁶³

¹²⁵⁶ EU FWS, para. 1340.

¹²⁵⁷ EU FWS, para. 1341 and note 2497.

¹²⁵⁸ *Qantas May Take 787-9s in 2016 Despite Cancellations*, Aviation Week (Aug. 23, 2012) (Exhibit EU-706).

¹²⁵⁹ See *EC – Large Civil Aircraft (AB)*, para. 1171.

¹²⁶⁰ EU FWS, para. 1342.

¹²⁶¹ See *US – Large Civil Aircraft (AB)*, para. 1054.

¹²⁶² EU FWS, para. 1342.

¹²⁶³ See *EC – Large Civil Aircraft (AB)*, para. 1171.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 269

iii. Icelandair

852. The EU claims that Icelandair's order of 4 787s in 2005 and 2006 represents a lost sale.¹²⁶⁴ The sale was found to be a lost sale of A330s or Original A350s in the original proceeding.¹²⁶⁵ The EU has not alleged in this compliance proceeding that U.S. subsidies are causing adverse effects in the form of lost sales of the A330 or the Original A350. Moreover, having been found to be a lost sale of the A330 or Original A350, the 2005 and 2006 Icelandair sale certainly cannot be a lost sale of A350 XWBs.

853. The EU also claims that the subsidies cause a threat of significant lost sales to the extent Icelandair continues to retain options and purchase rights that flow from the 2005 and 2006 order.¹²⁶⁶ The EU has presented no evidence that any options or purchase rights even exist, much less that they will be exercised. Thus, the EU's claim is based entirely on allegation and conjecture. Because the serious prejudice allegedly threatened is not clearly foreseen and imminent, the EU's claim fails.¹²⁶⁷

iv. Kenya Airways

854. The EU claims that the 2006 order of 9 787s by Kenya Airways represents a lost sale.¹²⁶⁸ The sale was found to be a lost sale of A330s or Original A350s in the original proceeding.¹²⁶⁹ The EU has not alleged in this compliance proceeding that U.S. subsidies are causing adverse effects in the form of lost sales of the A330 or the Original A350. Moreover, having been found to be a lost sale of the A330 or Original A350, the 2006 sale certainly cannot be a lost sale of A350 XWBs.

855. The EU also claims that the subsidies cause a threat of significant lost sales to the extent Kenya Airways continues to retain options and purchase rights that flow from the 2006 order.¹²⁷⁰ The EU has presented no evidence that any options or purchase rights even exist, much less that they will be exercised. Thus, the EU's claim is based entirely on allegation and conjecture. Because the serious prejudice allegedly threatened is not clearly foreseen and imminent, the EU's claim fails.¹²⁷¹

¹²⁶⁴ EU FWS, para. 1343.

¹²⁶⁵ See *US – Large Civil Aircraft (AB)*, paras. 1056-1063.

¹²⁶⁶ EU FWS, para. 1343.

¹²⁶⁷ See *EC – Large Civil Aircraft (AB)*, para. 1171.

¹²⁶⁸ EU FWS, para. 1344.

¹²⁶⁹ See *US – Large Civil Aircraft (AB)*, paras. 1056-1063.

¹²⁷⁰ EU FWS, para. 1344.

¹²⁷¹ See *EC – Large Civil Aircraft (AB)*, para. 1171.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 270

*b. The Lost Sales Claims Rejected by the Original Panel, and Not Appealed,
Cannot Be Re-Litigated; Even if Analyzed Again, They Should Be Rejected
Again for the Same Reasons.*

856. The EU also re-raises five sales campaigns that it alleged represented lost sales in the original proceeding. The original panel rejected each of these claims, and the EU did not appeal those findings. Accordingly, it cannot re-litigate these claims in this compliance proceeding. However, even if the compliance Panel did assess these claims again, they would fail for the same reasons.

i. All Nippon Airways

857. The EU alleges that the “subsidy-enhanced” characteristics of the 787 are a genuine and substantial cause of ANA’s decision to order 66 787s in 2004, 2009, 2012.¹²⁷² The EU made the same claim with respect to the 2004 sale in the original proceeding, and it was rejected by the panel, due in part to Boeing’s pre-existing relationship with the airline and the particular routes to be serviced.¹²⁷³ The EU did not appeal this finding. The EU therefore cannot re-litigate the question of whether subsidy-enhanced characteristics caused Boeing to win the 2004 sale.

858. Moreover, the EU acknowledges that the 2009 and 2012 sales were merely exercises of options for an additional 5 787-8s and 11 787-9s.¹²⁷⁴ Therefore, because they were a consequence of the 2004 sale already determined not to be a lost sale, the 2009 and 2012 sales are similarly not lost sales.

859. Finally, even if the Panel reviewed the EU’s claim anew, it would still fail for the same reasons cited by the original panel – principally, Boeing’s pre-existing relationship with ANA and the particular routes to be serviced.

ii. Japan Airlines

860. The EU alleges that “subsidy-enhanced” characteristics of the 787 caused Japan Airlines (“JAL”) to order 45 787s in 2005, 2007, 2012.¹²⁷⁵ The EU made the same claim with respect to the 2005 sale in the original proceeding, and it was rejected by the panel, due in part to Boeing’s pre-existing relationship with the airline and the particular routes to be serviced.¹²⁷⁶ The EU did not appeal this finding. The EU therefore cannot re-litigate the question of whether subsidy-enhanced characteristics caused Boeing to win the 2005 sale.

¹²⁷² EU FWS, para. 1353.

¹²⁷³ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066; *EC – Large Civil Aircraft (Panel)*, para. 7.1787 and note 3725.

¹²⁷⁴ EU FWS, para. 1354.

¹²⁷⁵ EU FWS, para. 1363.

¹²⁷⁶ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066; *EC – Large Civil Aircraft (Panel)*, para. 7.1787 and note 3725.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 271

861. Moreover, the EU acknowledges that JAL exercised 5 options under the 2005 sale in 2009 and then exercised another 10 options in 2012.¹²⁷⁷ Therefore, because they were a consequence of the 2005 sale already determined not to be a lost sale, the 2007 and 2012 sales are similarly not lost sales.

862. Finally, even if the Panel reviewed the EU’s claim anew, it would still fail for the same reasons cited by the original panel – principally, Boeing’s pre-existing relationship with JAL and the particular routes to be serviced.

iii. Air Canada

863. The EU alleges that “subsidy-enhanced” characteristics of the 787 were a genuine and substantial cause of Air Canada’s decision to purchase 37 787s in 2005 and 2007.¹²⁷⁸ The EU made the same claim with respect to the 2005 sale in the original proceeding, and it was rejected by the panel, due to the airline’s preference for a mixed fleet and the effect of the A340/777 competition.¹²⁷⁹ The EU did not appeal this finding. The EU therefore cannot re-litigate the question of whether subsidy-enhanced characteristics caused Boeing to win the 2005 sale.

864. The EU also has not demonstrated that the 2007 sale was genuinely and substantially caused by effects from subsidies to the 787. The EU itself notes that **[[HSBI]]**.¹²⁸⁰ Thus, it is not surprising that, when Air Canada acquired additional wide-body aircraft in 2007, it **[[HSBI]]**. Indeed, as the Boeing news release relied upon by the EU indicates, Air Canada has ordered more 787s than any other carrier in the Western Hemisphere.¹²⁸¹

iv. Continental Airlines

865. The EU alleges that “subsidy-enhanced” characteristics of the 787 were a genuine and substantial cause of Continental’s decision to purchase 25 787s in 2004, 2006, and 2007.¹²⁸² The EU made the same claim with respect to the 2004 and 2006 sales in the original proceeding, and it was rejected by the panel, due to Boeing’s pre-existing relationship with the airline.¹²⁸³ The EU did not appeal this finding. The EU therefore cannot re-litigate the question of whether subsidy-enhanced characteristics caused Boeing to win the 2004 and 2006 sales.

¹²⁷⁷ See EU FWS, paras. 1364-1365.

¹²⁷⁸ EU FWS, para. 1377.

¹²⁷⁹ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066; *EC – Large Civil Aircraft (Panel)*, para. 7.1787 and note 3725.

¹²⁸⁰ EU FWS, para. 1380.

¹²⁸¹ *Boeing Air Canada Announce 23 Additional 787 Dreamliners*, Press Release, Boeing (Apr. 25, 2007) (Exhibit EU-740).

¹²⁸² EU FWS, para. 1390.

¹²⁸³ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066; *EC – Large Civil Aircraft (Panel)*, para. 7.1787 and note 3725.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 272

866. Moreover, the EU has produced no evidence to demonstrate that the 2007 order was a result of subsidies to the 787. Even the EU recognizes that Continental has an all-Boeing fleet and that there is a [[HSBI]].¹²⁸⁴ Therefore, it is not the least bit surprising that [[HSBI]].¹²⁸⁵ Thus, even if the Panel entertained the EU’s claim, it would fail for the same reasons (and more).

v. Northwest Airlines

867. The EU re-raises its claim that the 2005 order of 18 787s by Northwest Airlines (NWA) represents a lost sale.¹²⁸⁶ The original panel rejected this claim, due in part to Boeing’s pre-existing relationship with the airline and the particular routes to be serviced.¹²⁸⁷ The EU did not appeal this finding. The EU therefore cannot re-litigate the question of whether subsidy-enhanced characteristics caused Boeing to win the 2005 sale.

868. The EU notes that even if non-subsidy factors – such as the airline’s interest in opening new routes – may have also contributed to the 787 sales, such factors do not prevent a finding of a genuine and {sic} causal link between the subsidies and their effects.”¹²⁸⁸ The short answer is that, in this case, the original panel already determined that non-subsidy factors did prevent such a finding. Thus, even if the Panel were to entertain the EU’s re-litigation of this issue, the result would be the same.

c. New Lost Sales Claims

869. The EU’s “new” lost sales claims fail from the start because it has not demonstrated a genuine and substantial causal link between alleged subsidies to the 787 and the aircraft’s availability, technology, or pricing. Absent the alleged subsidies, therefore, the outcome of these sales campaigns would not have been any different.

870. Moreover, each of the EU’s campaign-specific arguments has flaws of its own, as demonstrated below. Most notable is the EU’s repeated reliance on conjecture rather than evidence.¹²⁸⁹ The EU attempts to remedy the weakness of these arguments by explaining that they are “based on the best available evidence.”¹²⁹⁰ The United States provided enormous amounts of material in response to the Panel’s Article 13 request, which was sought by the EU. *There is no excuse for the EU’s total failure to engage with those documents, including initial and final offers.* The EU has simply failed to meet its burden of proof.

¹²⁸⁴ EU FWS, para. 1395.

¹²⁸⁵ See EU FWS, para. 1390.

¹²⁸⁶ EU FWS, para. 1397.

¹²⁸⁷ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066; *EC – Large Civil Aircraft (Panel)*, para. 7.1787 and note 3725.

¹²⁸⁸ EU FWS, para. 1405.

¹²⁸⁹ See, e.g., EU FWS, paras. 1420, 1427.

¹²⁹⁰ EU FWS note 2619.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 273

i. Qatar Airways

871. The EU claims that the 2007 order of 30 787s by Qatar Airways represents a lost sale for the purposes of Article 6.3 of the SCM Agreement.¹²⁹¹ The EU’s argument is premised on the notion that, absent the R&D subsidies found in the original proceeding, Boeing would never have developed the technology and fuel efficiency of the 787.¹²⁹² This is not what was found in the original proceeding. Rather, R&D subsidies to the 787 were found to accelerate the launch of the 787.¹²⁹³ Absent the subsidies, Boeing would have launched the 787 no later than 2006, before the 2007 Qatar Airways sale campaign.

872. In addition, the EU continues to rely on conjecture instead of evidence available to it. Thus, it states that **[[HSBI]]**.¹²⁹⁴ As discussed above, this reliance on conjecture is impermissible, particularly in light of the extensive materials the United States provided in response to the Panel’s Article 13 request. The EU has failed to engage with those documents, and it has failed to meet its burden of proof.

873. The EU also falls back on its common argument that **[[HSBI]]**. The original panel already rejected this line of argument, explaining: “{a}lthough 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.”¹²⁹⁵

874. **[[HSBI]]**, the error of trying to match the 787 with the Original A350 instead of immediately working on a more advanced aircraft like the A350 XWB is Airbus’s fault, not the result of subsidies to Boeing.¹²⁹⁶ Moreover, the fact that Qatar Airlines originally purchased the Original A350 does not help the EU’s case. The EU does not explain how, if Boeing intended to strategically use subsidies to drop 787 prices below what is commercially justifiable, it would have lost the sale in 2005 to the Original A350.

875. Finally, the EU’s argument is self-defeating. The EU states that Qatar Airlines **[[HSBI]]**¹²⁹⁷ **[[HSBI]]**¹²⁹⁸ **[[HSBI]]**.¹²⁹⁹ As the EU notes, Qatar Airlines did purchase 80

¹²⁹¹ EU FWS, para. 1410.

¹²⁹² See EU FWS, para. 1428.

¹²⁹³ See *US – Large Civil Aircraft (Panel)*, para. 7.1775; *US – Large Civil Aircraft (AB)*, para. 1040.

¹²⁹⁴ EU FWS, paras. 1420, 1427.

¹²⁹⁵ *US – Large Civil Aircraft (Panel)*, para. 7.1793.

¹²⁹⁶ EU FWS, para. 1411.

¹²⁹⁷ EU FWS, para. 1413.

¹²⁹⁸ EU FWS, para. 1423.

¹²⁹⁹ EU FWS, para. 1415.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 274

A350 XWBs¹³⁰⁰ [[HSBI]]. Therefore, any additional orders would have been delivered after the 80 already scheduled for delivery, or at least well after the first delivery. Judging by the airline’s emphasis [[HSBI]], it would not have made sense to order additional Airbus aircraft that would have to be delivered sometime after the first 80 were delivered instead of obtaining 30 787s from Boeing. Indeed, as the A350 XWB was launched in response to the 787, there is no counterfactual where the A350 XWB would have been available before the 787.

876. For all of these reasons, the EU’s lost sale claim with respect to Qatar Airways fails.

ii. British Airways

877. The EU claims that subsidies benefitting the 787 caused Airbus a lost sale represented by British Airways’ 2007 order of 24 787s. The EU commits several errors and ignores numerous non-subsidy factors that make clear that any subsidies to the 787 were not a genuine and substantial cause of the lost sale.¹³⁰¹

878. As the EU notes, Boeing has a pre-existing relationship with British Airways, which was a traditional Boeing wide-body customer.¹³⁰² This is one of the non-subsidy factors the original panel indicated can be decisive in assessing whether there is a causal relationship between subsidies and the market phenomena in Article 6.3.¹³⁰³

879. The EU also notes that “British Airways [[HSBI]].¹³⁰⁴ This shows that either [[HSBI]]. This is certainly not attributable to any subsidies to the 787.

880. The EU’s argument is premised on the notion that, absent the R&D subsidies found in the original proceeding, Boeing would never have developed the technology on the 787.¹³⁰⁵ This is not what was found in the original proceeding. Rather, R&D subsidies to the 787 were found to accelerate the launch of the 787.¹³⁰⁶ Therefore, the EU’s argument relies on an incorrect premise.

881. In addition, the EU’s own evidence shows that [[HSBI]].¹³⁰⁷ Also, [[HSBI]].¹³⁰⁸ There were also issues with [[HSBI]].¹³⁰⁹ Thus, the numerous non-subsidy factors that led to

¹³⁰⁰ EU FWS, para. 1411.

¹³⁰¹ EU FWS, para. 1430.

¹³⁰² EU FWS, para. 1431.

¹³⁰³ See *US – Large Civil Aircraft (Panel)*, note 3725.

¹³⁰⁴ EU FWS, para. 1438 (internal quotation omitted).

¹³⁰⁵ See EU FWS, para. 1438.

¹³⁰⁶ See *US – Large Civil Aircraft (Panel)*, para. 7.1775; *US – Large Civil Aircraft (AB)*, para. 1040.

¹³⁰⁷ [[HSBI]] (Exhibit EU-781(HSBI)).

¹³⁰⁸ [[HSBI]] (Exhibit EU-781(HSBI)); [[HSBI]] (Exhibit EU-780(HSBI)).

¹³⁰⁹ [[HSBI]] (Exhibit EU-780(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 275

Boeing winning the sale of an established customer make clear that there is no causal link to the subsidies at issue.

882. For these reasons, the EU's lost sale claim with respect to British Airways fails.

iii. Air Berlin

883. The EU argues that the alleged subsidies were a genuine and substantial cause of Boeing winning Air Berlin's 2007 order for 15 787s.¹³¹⁰ The EU's own evidence provides important non-subsidy factors that undermine the EU's claim.

884. The EU's evidence indicates that Airbus **[[HSBI]]** An e-mail contains the following opinion from an Airbus executive involved in the campaign:

[[HSBI]].¹³¹¹

885. In addition, there is evidence that, while Air Berlin was **[[HSBI]]**, it felt that **[[HSBI]]**.¹³¹²

886. Finally, the EU's own evidence indicates that **[[HSBI]]**.¹³¹³ The EU ignores this evidence, but it makes clear that the alleged subsidies were not a genuine and substantial cause of Boeing winning the sale.

887. For these reasons, the EU's lost sale claim with respect to Air Berlin fails.

iv. LAN Airlines

888. The EU claims that subsidies to the 787 caused Airbus a lost sale represented by the 2007 order of 26 787s by LAN Airlines.¹³¹⁴

889. The EU states that Airbus could only offer A350 XWBs for delivery **[[HSBI]]**, while LAN **[[HSBI]]**.¹³¹⁵ **[[HSBI]]**. Meanwhile, the EU states that Boeing could offer 787s **[[HSBI]]**.¹³¹⁶ The EU's own story demonstrates no causal link between the subsidies and the lost sale.

¹³¹⁰ EU FWS, para. 1442.

¹³¹¹ **[[HSBI]]** (Exhibit EU-791(HSBI)).

¹³¹² **[[HSBI]]** (Exhibit EU-791(HSBI)); **[[HSBI]]** (Exhibit EU-792(HSBI)).

¹³¹³ **[[HSBI]]** (Exhibit EU-788(HSBI)).

¹³¹⁴ EU FWS, para. 1450.

¹³¹⁵ EU FWS, para. 1453.

¹³¹⁶ EU FWS, para. 1454.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 276

890. Even in the absence of the R&D subsidies to the 787 found in the original proceeding, Boeing would have been able to launch the 787 no later than 2006 with promised deliveries in 2010. Therefore, even without the subsidies, Boeing could have offered delivery dates earlier than [[HSBI]].

891. Furthermore, the EU relies on speculation, while ignoring the documents that the United States provided in response to the Panel’s Article 13 request.¹³¹⁷ The EU also ignores its own evidence, which demonstrates that [[HSBI]].¹³¹⁸ In addition, [[HSBI]].¹³¹⁹ [[HSBI]].¹³²⁰ The EU ignores these important non-subsidy factors, which make clear that the alleged subsidies were certainly not a genuine and substantial cause of Boeing winning the sale.

892. For these reasons, the EU’s lost sale claim with respect to LAN Airlines fails.

v. *ILFC*

893. The EU claims that subsidies to the 787 caused Airbus a lost sale represented by the 2007 order of 52 787s by ILFC.¹³²¹

894. The EU argues that it was [[HSBI]].¹³²² The original panel already rejected this line of argument, explaining: “{a}though 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.”¹³²³

895. In addition, the leasing company had some leverage with Airbus due to the cancellation of the Original A350. This is not the fault of Boeing or any subsidies - the error of trying to match the 787 with the Original A350 instead of immediately working on the A350 XWB was Airbus’s fault.¹³²⁴ This error provides another non-subsidy factor that accounts for some of the delay in A350 XWB deliveries. In other words, had Airbus correctly read the market and immediately begun working on the A350 XWB to respond to the 787, it would have been able to promise deliveries sooner. In fact, ILFC in particular was [[HSBI]].¹³²⁵

¹³¹⁷ EU FWS, para. 1461.

¹³¹⁸ [[HSBI]] (Exhibit EU-794(HSBI)).

¹³¹⁹ [[HSBI]] (Exhibit EU-795(HSBI)).

¹³²⁰ [[HSBI]] (Exhibit EU-794(HSBI)).

¹³²¹ EU FWS, para. 1463.

¹³²² EU FWS, para. 1467.

¹³²³ *US – Large Civil Aircraft (Panel)*, para. 7.1793.

¹³²⁴ EU FWS, para. 1411.

¹³²⁵ [[HSBI]] (Exhibit EU-804(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 277

896. The EU also relies on speculation, stating [[HSBI]].¹³²⁶ Again, the EU chose to ignore the myriad documents provided by the United States in response to the Panel’s Article 13 request. There is no excuse for the EU’s failure to engage with the massive amounts of information it requested that the Panel seek.

897. Finally, the EU position with respect to this campaign rests on the idea that it is entitled to expect a customer like ILFC to maintain a “balanced” portfolio of Airbus and Boeing aircraft.¹³²⁷ This is similar to the EU’s assumption that it should have a 50 percent market share in all large markets, and no more valid. The EU provides no evidence to demonstrate that, in the absence of subsidies, it would earn 50 percent of every customer’s business, or of ILFC’s business in particular.

898. For these reasons, the EU’s lost sale claim with respect to ILFC fails.

vi. Virgin Atlantic Airways

899. The EU claims that subsidies to the 787 caused Airbus a lost sale represented by the 2007 order of 15 787s by Virgin Atlantic Airways.¹³²⁸

900. As the EU explains, the sale it sought was to [[HSBI]].¹³²⁹ However, the EU disregards that Airbus faced an uphill battle with a customer [[HSBI]], and irritated because it considered that Airbus “grossly misrepresented” [[HSBI]].¹³³⁰ Both of these situations were Airbus’s fault, not a result of any subsidies to the 787, and represent serious non-subsidy factors weighing against Airbus. In addition, Virgin felt that there were [[HSBI]].¹³³¹ There is also evidence that Virgin was trying to [[HSBI]].¹³³² Furthermore, [[HSBI]].¹³³³

901. It is against this backdrop that the EU claims that, but for subsidies to the 787, [[HSBI]].¹³³⁴ Needless to say, the EU has failed to demonstrate that subsidies to the 787 were a genuine and substantial cause of Boeing winning the [[HSBI]] sale of 787s.

902. Accordingly, the EU’s lost sale claim with respect to Virgin Atlantic Airways fails.

¹³²⁶ EU FWS, para. 1466; *see also ibid.*, para. 1468.

¹³²⁷ *See* EU FWS, para. 1463.

¹³²⁸ EU FWS, para. 1477.

¹³²⁹ EU FWS, para. 1479.

¹³³⁰ [[HSBI]] (Exhibit EU-809(HSBI)).

¹³³¹ [[HSBI]] (Exhibit EU-808(HSBI)).

¹³³² [[HSBI]] (Exhibit EU-808(HSBI)).

¹³³³ [[HSBI]] (Exhibit EU-808(HSBI)).

¹³³⁴ EU FWS, para. 1480.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 278

vii. Etihad Airways

903. The EU claims that subsidies to the 787 caused Airbus lost sales represented by the 2008 and 2011 purchases of 41 787s by Etihad Airways.¹³³⁵ This was always a split sale. In 2008, Etihad bought 25 A350 XWBs and 35 787s.¹³³⁶ As the EU notes, Etihad subsequently cancelled 13 of its A350 XWB orders because of delays in the A350 XWB program, and purchased an additional 10 787s.¹³³⁷ The EU alleges that, but for the subsidies, Etihad would have purchased more A350 XWBs and fewer 787s.¹³³⁸

904. It is not plausible to allege that sales won by Boeing as a direct consequence of delays at Airbus are genuinely and substantially caused by subsidies to the 787.¹³³⁹ Needless to say, the EU has not shown this is the case. Moreover, it stands to reason that, had Etihad initially ordered more A350 XWBs, it would have cancelled more when the delays set in.

905. The EU's own evidence makes clear that subsidies to the 787 did not relate to [[HSBI]].¹³⁴⁰ As a result, [[HSBI]].¹³⁴¹

906. Moreover, Airbus had a [[HSBI]].¹³⁴² The EU ignores these critical factors, which make clear that subsidies to the 787 were not a genuine and substantial cause of Boeing winning the orders it did.

907. For these reasons, the EU's lost sale claim with respect to the Etihad Airways fails.

viii. United Airlines

908. The EU claims that subsidies to the 787 were a genuine and substantial cause of United Airlines' decision to order 25 787-8s in 2010.¹³⁴³ As the EU notes, this was a split order, where United also ordered 25 A350 XWB-900s.¹³⁴⁴ The EU's contention then is that, absent subsidies to the 787, United would have increased its number of Airbus aircraft.¹³⁴⁵

¹³³⁵ EU FWS, para. 1485.

¹³³⁶ EU FWS, para. 1488.

¹³³⁷ EU FWS, para. 1488.

¹³³⁸ EU FWS, para. 1485.

¹³³⁹ See [[HSBI]] (Exhibit EU-834(HSBI)) ([[HSBI]]).

¹³⁴⁰ See [[HSBI]] (Exhibit EU-815(HSBI)); [[HSBI]] (Exhibit EU-830(HSBI)); [[HSBI]] (Exhibit EU-829(HSBI)).

¹³⁴¹ [[HSBI]] (Exhibit EU-815(HSBI)); see also [[HSBI]] (EU-824(HSBI)).

¹³⁴² [[HSBI]] (Exhibit EU-815(HSBI)).

¹³⁴³ EU FWS, para. 1499.

¹³⁴⁴ EU FWS, para. 1502.

¹³⁴⁵ EU FWS, para. 1502.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 279

909. The EU argues that, absent subsidies to the 787 allowing early availability, [[HSBI]].¹³⁴⁶ This is contrary to the evidence, and to economic logic. The airline's preference to take delivery [[HSBI]] would not change.¹³⁴⁷ If United could not take delivery of any aircraft until [[HSBI]].¹³⁴⁸ In addition, the evidence demonstrates that [[HSBI]].¹³⁴⁹

910. In addition to flawed reasoning, the EU also ignores that numerous other non-subsidy factors that were critical to Boeing winning the sale. First, [[HSBI]].¹³⁵⁰

911. Also, Airbus [[HSBI]].¹³⁵¹ This was particularly important where [[HSBI]].¹³⁵²

912. Finally, United had been a dedicated all-Boeing twin-aisle customer before it ordered the A350 XWB. The Appellate Body and original panel have both observed the importance of considering this type of pre-existing relationship when determining whether subsidies are a genuine and substantial cause of adverse effects.¹³⁵³ Even Airbus noted: [[HSBI]].¹³⁵⁴ Thus, Boeing's strategy stemming from its relationship with United was largely the cause of the earlier delivery positions offered for the 787. And even amid all of these concerns, Airbus sold the same number of A350 XWBs that Boeing sold 787s. These factors clearly show that any subsidies to the 787 were certainly not the cause of Boeing winning 25 orders of the 787-8.

913. For these reasons, the EU's lost sale claim with respect to United Airlines fails.

ix. Air France – KLM

914. The EU fails to show that subsidies to the 787 were a genuine and substantial cause of Air France – KLM ordering 25 787-9s in late 2011.¹³⁵⁵ As the EU notes, Air France – KLM committed to ordering A350 XWBs at the same time it committed to ordering the 787s.¹³⁵⁶ The EU contends that, but for subsidies to the 787, Airbus would have secured a larger order.¹³⁵⁷

¹³⁴⁶ EU FWS, para. 1506.

¹³⁴⁷ See EU FWS, para. 1506.

¹³⁴⁸ See EU FWS, para. 1504.

¹³⁴⁹ [[HSBI]] (Exhibit EU-848(HSBI)).

¹³⁵⁰ [[HSBI]] (Exhibit EU-848(HSBI)).p. 3 (Exhibit EU-848); see also [[HSBI]] (Exhibit EU-846(HSBI)).

¹³⁵¹ [[HSBI]] (Exhibit EU-845).

¹³⁵² [[HSBI]] (Exhibit EU-846(HSBI)).

¹³⁵³ See *US – Large Civil Aircraft (AB)*, paras. 1054, 1066, 1212-1216.

¹³⁵⁴ [[HSBI]] (Exhibit EU-845).

¹³⁵⁵ EU FWS, para. 1512.

¹³⁵⁶ EU FWS, para. 1513.

¹³⁵⁷ EU FWS, para. 1513.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 280

915. This is not supported by the evidence, which shows that [[HSBI]].¹³⁵⁸ Thus, the EU has failed to show that subsidies were a genuine and substantial cause of Boeing winning part of the order. Accordingly, the EU’s lost sale claim with respect to Air France – KLM fails.

x. Aeromexico

916. The EU’s evidence demonstrates that subsidies to the 787 were not a genuine and substantial cause of Aeromexico ordering 6 787s (or 60 737 MAXs).¹³⁵⁹ Boeing’s pre-existing relationship with the customer was of paramount importance.

917. The EU argues that “Aeromexico’s [[HSBI]].¹³⁶⁰ The evidence tells a different story. The documents relied on by the EU show that:

- [[HSBI]].¹³⁶¹
- [[HSBI]].¹³⁶²
- [[HSBI]].¹³⁶³
- [[HSBI]].¹³⁶⁴
- [[HSBI]].¹³⁶⁵
- [[HSBI]].¹³⁶⁶

918. Accordingly, the EU has failed to show that subsidies to the 787 (or 737 MAX) were a genuine and substantial cause of the Aeromexico’s order. Therefore, the EU’s lost sale claim with respect to Aeromexico fails.

xi. Lion Air

919. The EU fails to show that subsidies to the 787 were a genuine and substantial cause of Lion Air ordering 5 787s in 2012. As explained in Section IV.I.3.g, Lion Air’s pre-existing

¹³⁵⁸ [[HSBI]] (Exhibit EU-855(HSBI)).

¹³⁵⁹ See EU FWS, para. 1532.

¹³⁶⁰ EU FWS, para. 1544 (emphasis added).

¹³⁶¹ [[HSBI]] (Exhibit EU-860(HSBI)).

¹³⁶² [[HSBI]] (Exhibit EU-859(HSBI)).

¹³⁶³ See [[HSBI]] (Exhibit EU-859(HSBI)).

¹³⁶⁴ [[HSBI]] (Exhibit EU-866(HSBI)).

¹³⁶⁵ [[HSBI]] (Exhibit EU-866(HSBI)).

¹³⁶⁶ [[HSBI]] (Exhibit EU-859(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 281

relationship with Boeing was paramount to Boeing winning the sale. As the EU recognizes, Lion Air was an all-Boeing airline and Boeing’s largest customer in Asia.¹³⁶⁷ While Airbus did obtain a large single-aisle order from the airline,¹³⁶⁸ there is no reason to believe that Lion Air would have purchased more Airbus aircraft absent subsidies to the 787. Therefore, the EU’s lost sale claim with respect to Lion Air’s purchase of 5 787s fails.

5. Threat of Significant Lost Sales

920. The EU argues that “US subsidies benefitting Boeing Boeing’s 787 and 777X family LCA also presently cause a present *threat* of significant lost sales, within the meaning of Article 6.3(c) and footnote 13 of the *SCM Agreement*.”¹³⁶⁹ The EU contends that it has shown significant lost sales of the A350 XWB, and that Boeing’s competitive edge “is bound to result in further significant lost sales” to the 787.¹³⁷⁰ The EU also predicts that the future launch of the 787-10X and 777X will result in sales of those aircraft at the expense of the A350 XWB.¹³⁷¹

921. The EU fails to meet the requirements of a threat claim. Referring to Article 15.7 of the *SCM Agreement* as relevant guidance, the Appellate Body in *EC – Large Civil Aircraft* stated that a determination of threat of serious prejudice must “‘be based on facts and not merely allegation, conjecture or remote possibility’ and that ‘{t}he change in circumstances’ that would create a situation in which the subsidy would cause {serious prejudice} ‘must be clearly foreseen and imminent.’”¹³⁷² What the EU has done is exactly what the Appellate Body indicated was insufficient – namely, offer conjecture that fails to evidence any imminent serious prejudice. As a result, the EU’s threat of significant lost sales claim fails.

6. Impedance and Threat Thereof

922. The Appellate Body has explained the legal and evidentiary standards regarding impedance and threat of impedance as follows:

{I}mpedance refers to a situation where the exports or imports of the like product of the complaining Member would have expanded more had they not been ‘obstructed’ or ‘hindered’ by the subsidized product, or where exports or imports of the like product did not materialize at all because production was ‘held back’ by the subsidized product. We observe that Article 6.4 of the *SCM Agreement*, which applies to both phenomena referred to in Article 6.3(a) and (b), requires that, as with displacement, a finding of impedance should be supported by

¹³⁶⁷ See EU FWS, para. 1726.

¹³⁶⁸ EU FWS, para. 1722.

¹³⁶⁹ EU FWS, para. 1555.

¹³⁷⁰ EU FWS, para. 1558.

¹³⁷¹ EU FWS, para. 1561.

¹³⁷² *EC – Large Civil Aircraft (AB)*, para. 1171.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 282

evidence of changes in the relative market share in favour of the subsidized product, over a sufficiently representative period, to demonstrate “clear trends” in the development of the market concerned. Since, unlike with displacement, however, impedance may not be a visible phenomenon, evidence of trends may not be dispositive, or may hold less probative value, for a finding of impedance.¹³⁷³

923. The EU alleges that imports of A350 XWBs are impeded or threatened with impedance in the U.S. market and 13 third-country markets as a result of subsidies to the 787.¹³⁷⁴ The EU has failed to demonstrate impedance or threat of impedance in any of these markets. This is the result of several errors the EU repeats across the various country markets. We will discuss those errors here before turning to each claim.

924. **Lack of Evidence.** The United States recalls the Appellate Body’s guidance that impedance claims should be supported by evidence of changes in the relative market share, over a sufficiently representative period, to demonstrate clear trends.¹³⁷⁵ The EU has not produced a single piece of evidence summarizing market share over a representative period of time for any of the markets with respect to which it asserts claims of impedance and/or threat of impedance. The EU’s failure to produce any evidence to this effect means that it has failed to make a *prima facie* case of impedance and/or threat of impedance in the EU’s “new technology twin-aisle market.”

925. **Reliance on Lost Sales.** The EU in many of its claims relies on lost sales, often just a single one. The Appellate Body has already made clear that this is insufficient. In the original proceeding, the panel found lost sales caused by subsidies to the 787 in four campaigns – Qantas (2005), Ethiopian Airlines (2005), Icelandair (2005), and Kenya Airways (2006).¹³⁷⁶ The original panel also found threat of impedance in the Australian, Ethiopian, Icelandic, and Kenyan markets “based on delivery data for the four countries where the sales campaigns on which its lost sales finding was based took place.”¹³⁷⁷ The Appellate Body upheld the lost sales finding for those four campaigns.¹³⁷⁸ However, it found that the evidence did not support the original panel’s finding of threat of displacement and impedance with respect to the Ethiopian, Icelandic, and Kenyan markets because of a failure to “identify clear trends demonstrating such a

¹³⁷³ *US – Large Civil Aircraft (AB)*, para. 1086 (internal citations omitted).

¹³⁷⁴ See EU FWS, para. 1570. The 13 third-country markets are: Australia, Canada, Chile, China, Ethiopia, Iceland, India, Japan, Kenya, Mexico, Qatar, UAE, and Indonesia.

¹³⁷⁵ *US – Large Civil Aircraft (AB)*, para. 1086 (internal citations omitted).

¹³⁷⁶ See *US – Large Civil Aircraft (AB)*, para. 1068.

¹³⁷⁷ *US – Large Civil Aircraft (AB)*, para. 1072.

¹³⁷⁸ See *US – Large Civil Aircraft (AB)*, para. 1068.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 283

threat.”¹³⁷⁹ Thus, the Appellate Body has unambiguously indicated that mere recitation of lost sales in a market is insufficient to prove displacement, impedance, or threat thereof.

926. **Market Share Assumptions Not Based on Evidence.** As the EU explains, it “uses, as a benchmark for assessing impedance and threat thereof in large volume markets whether Boeing’s market share significantly exceeds 50 percent.”¹³⁸⁰ All such claims unquestionably fail because the SCM Agreement does not permit a panel to make a blanket assumption that market shares should be 50 percent for each of two duopolists in evaluating alleged displacement or impedance. In addition, the EU has not shown that, absent subsidies, the market shares would be 50 percent in any individual country market, much less all large markets. A *prima facie* case would require a demonstration, with actual evidence, that Airbus’s products were impeded in each of the relevant markets, and that such impedance was genuinely and substantially caused by the subsidies at issue. The EU has failed to do this.

927. **Re-litigation of Resolved Issues.** The EU raises numerous impedance and threat of impedance claims that it lost in the original proceeding. The original panel rejected the EU’s threat of impedance claims alleged as a result of subsidies to the 787 in the U.S., Canadian, and Japanese markets, and the EU did not appeal these findings.¹³⁸¹ In addition, the Appellate Body reversed findings of threat of impedance with respect to the Ethiopian, Icelandic, and Kenyan markets.¹³⁸² The EU now raises the exact same claims that were already rejected in the original proceeding.

928. **Reliance on Evidence Pertaining to the A330 and Original A350.** The EU is very clear that it alleges impedance and threat of impedance with respect to the A350 XWB. Nevertheless, in some instances the EU relies on sales campaigns that it alleged in the original proceeding were lost sales of the A330 or Original A350. These include the U.S. market (Continental (2004) and Northwest (2005)), the Canadian market (Air Canada (2005)), the Ethiopian market (Ethiopian Airways 2005)), the Icelandic market (Icelandair 2005, 2006)), and the Japanese market (ANA (2004) and JAL (2005)). The United States has already explained above why reliance solely on lost sales is insufficient. However, even if it were, lost sales of A330s or Original A350s cannot support impedance or threat of impedance claims with respect to the A350 XWB.

929. The United States will now turn to the individual markets in which the EU has alleged impedance and/or threat of impedance.

¹³⁷⁹ *US – Large Civil Aircraft (AB)*, para. 1126. The threat of impedance in the Australia market was not appealed.

¹³⁸⁰ EU FWS, para. 1582.

¹³⁸¹ *US – Large Civil Aircraft (AB)*, para. 1126.

¹³⁸² *US – Large Civil Aircraft (AB)*, 1350(d)(i)(A)(5).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 284

a. *The EU Has Failed to Demonstrate Impedance or Threat thereof under
Article 6.3(a) of the SCM Agreement.*

930. The EU is precluded from raising a claim of impedance and threat of impedance in the market of the “subsidizing Member,” the United States. In the original proceeding it alleged displacement and impedance (or threat thereof) of its exports to the U.S. 200-300 seat market, which included the 787. However, the EU failed to obtain a finding from the original panel regarding displacement or impedance in this market as a result of losing its lost sales claims regarding Continental Airlines and Northwest Airlines.¹³⁸³ The EU did not appeal this finding.¹³⁸⁴ The EU has provided no justification for re-litigating in the compliance proceeding impedance and threat thereof in the U.S. market.¹³⁸⁵

931. Nevertheless, the EU attempts to do just that, relying again on the Continental Airlines alleged lost sales (2004, 2006, and 2007)¹³⁸⁶ and the Northwest Airlines alleged lost sale (2005), along with a 2010 United Airlines alleged lost sale.¹³⁸⁷ Of course, as discussed in Sections

¹³⁸³ The Appellate Body explained it as follows:

We also note that the Panel does not appear to have explicitly reached any finding or conclusion regarding the European Communities' claim that the United States' use of the subsidies at issue has caused displacement and impedance of its exports to the United States, within the meaning of Article 6.3(a) of the *SCM Agreement*, with respect to orders of Airbus' A330 and Original A350 families of LCA, or, in the alternative, threat of displacement or impedance with respect to deliveries of Airbus' A330 and A350XWB-800 families of LCA. Nevertheless, it seems to us that, in finding that factors other than the performance characteristics or the timing of the availability of the 787 led to the decisions of Continental Airlines and Northwest Airlines to purchase Boeing LCA rather than Airbus LCA, the Panel effectively found that the European Communities had not made out this aspect of its claim. (*Ibid.*, para. 7.1786 and footnote 3725 thereto) In any event, the European Union has not appealed the lack of an explicit finding by the Panel in this regard.

US – Large Civil Aircraft (AB), note 82.

¹³⁸⁴ See *US – Large Civil Aircraft (AB)*, note 82.

¹³⁸⁵ See DSU, Art. 17.14 (requiring that the recommendations and rulings adopted by the DSB be “unconditionally accepted by the parties to the dispute”); *EC – Bed Linen (21.5) (AB)*, para. 98 (“It would be incompatible with the function and purpose of the WTO dispute settlement system if a claim could be reasserted in Article 21.5 proceedings after the original panel or the Appellate Body has made a finding that the challenged aspect of the original measure is *not* inconsistent with WTO obligations, and that report has been adopted by the DSB.” (emphasis in original)); *Mexico – Corn Syrup (21.5) (AB)*, para. 79 (“We also note that Mexico did not appeal the original panel’s report, and that Articles 3.2 and 3.3 of the DSU reflect the importance to the multilateral trading system of security, predictability and the prompt settlement of disputes. We see no basis for us to examine the original panel’s treatment of the alleged restraint agreement.”).

¹³⁸⁶ The 2004 and 2006 Continental lost sales claims were rejected in the original proceeding.

¹³⁸⁷ EU FWS, para. 1586.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 285

IV.H.4.b.iv and IV.H.4.b.v above, the EU cannot re-litigate the Continental and Northwest lost sales in this compliance proceeding. Thus, because the EU's impedance and threat of impedance claim is a consequence of those alleged lost sales claims that were already rejected in the original proceeding, the impedance and threat claim necessarily fails.

932. And even if these claims were appropriate to raise in this proceeding, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance.¹³⁸⁸ It has simply referenced alleged lost sales – United Airlines (2010 sale), Continental Airlines (2004, 2006, 2007 sales), and Northwest Airlines (2005 sale). As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(a) of the SCM Agreement.¹³⁸⁹ Therefore, the EU's claim cannot be sustained.

933. For all these reasons, the EU's claim of impedance and threat of impedance fails.

b. The EU Has Failed to Demonstrate Impedance or Threat thereof in Third-Country Markets under Article 6.3(b) of the SCM Agreement.

934. The Appellate Body has found that Article 6.4 of the SCM Agreement requires that, as with displacement, a finding of impedance should be supported by evidence of changes in the relative market share in favour of the subsidized product, over a sufficiently representative period, to demonstrate "clear trends" in the development of the market concerned.¹³⁹⁰ The EU has not done this.

i. Canada (alleged threat of impedance)

935. The EU is precluded from re-litigating this claim. In the original proceeding it alleged displacement and impedance (or threat thereof) in the Canadian 200-300 seat market (which included the 787). However, the EU failed to obtain a finding from the original panel regarding displacement or impedance in this market as a result of losing its Air Canada (2005) lost sale claim.¹³⁹¹ The EU did not appeal this finding.¹³⁹² Therefore, the EU cannot now re-litigate in this compliance proceeding threat of impedance in the Canadian market.¹³⁹³

¹³⁸⁸ See *US – Large Civil Aircraft (AB)*, para. 1086 ("We observe that Article 6.4 of the *SCM Agreement*, which applies to both phenomena referred to in Article 6.3(a) and (b), requires that, as with displacement, a finding of impedance should be supported by evidence of changes in the relative market share in favour of the subsidized product, over a sufficiently representative period, to demonstrate 'clear trends' in the development of the market concerned.").

¹³⁸⁹ See *US – Large Civil Aircraft (AB)*, para. 1241 ("We do not agree with the implication of the Panel's reasoning that the phenomena of displacement and impedance necessarily follow from a finding of significant lost sales.").

¹³⁹⁰ *US – Large Civil Aircraft (AB)*, para. 1086.

¹³⁹¹ The Appellate Body explained it as follows:

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 286

936. Nevertheless, the EU attempts to do just that, relying again on the 2005 Air Canada lost sale claim (along with a 2007 lost sales claim).¹³⁹⁴ Of course, as discussed in Section IV/H.4.b.iii above, the EU cannot re-litigate the Air Canada lost sales. Therefore, because the EU's threat of impedence claim is a consequence of those alleged lost sales claims that were already rejected in the original proceeding, the threat of impedence claim necessarily fails.

937. And even if these claims were appropriate to raise in this proceeding, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedence;¹³⁹⁵ it has simply referenced alleged lost sales – Air Canada (2005, 2007 sales).¹³⁹⁶ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedence under Article 6.3(b) of the SCM Agreement.¹³⁹⁷ Therefore, the EU's claim cannot even arguably be sustained.

938. For all these reasons, the EU's claim of threat of impedence fails.

We also note that the Panel does not appear to have explicitly reached any finding or conclusion regarding the European Communities' claim that the United States' use of the subsidies at issue has caused displacement and impedence of its exports to the United States, within the meaning of Article 6.3(a) of the *SCM Agreement*, with respect to orders of Airbus' A330 and Original A350 families of LCA, or, in the alternative, threat of displacement or impedence with respect to deliveries of Airbus' A330 and A350XWB-800 families of LCA. Nevertheless, it seems to us that, in finding that factors other than the performance characteristics or the timing of the availability of the 787 led to the decisions of Continental Airlines and Northwest Airlines to purchase Boeing LCA rather than Airbus LCA, the Panel effectively found that the European Communities had not made out this aspect of its claim. (*Ibid.*, para. 7.1786 and footnote 3725 thereto) In any event, the European Union has not appealed the lack of an explicit finding by the Panel in this regard.

US – Large Civil Aircraft (AB), note 82. The Air Canada (2005) significant lost sale was disposed of by the original panel (and is otherwise indistinguishable) from the Continental and Northwest sales. See *US – Large Civil Aircraft*, para. 7.1786, notes 3724-3725.

¹³⁹² See *US – Large Civil Aircraft (AB)*, note 82.

¹³⁹³ See DSU, Art. 17.14; *US – Upland Cotton (21.5) (AB)*, para. 210; *EC – Bed Linen (21.5) (AB)*, para. 98; *Mexico – Corn Syrup (21.5) (AB)*, para. 79.

¹³⁹⁴ See EU FWS, para. 1588. The EU itself notes that [[HSBI]].¹³⁹⁴ Thus, it is not surprising that, when Air Canada acquired additional wide-body aircraft in 2007, it [[HSBI]]. It stands to reason that, generally, if the original sale is not a lost sale for purposes of Article 6.3, the follow-up order from a committed customer would normally not constitute a lost sale either.

¹³⁹⁵ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹³⁹⁶ EU FWS, para. 1588.

¹³⁹⁷ See *US – Large Civil Aircraft (AB)*, para. 1241.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 287

ii. Chile (alleged impedance and threat thereof)

939. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance;¹³⁹⁸ it has simply referenced a single alleged lost sale – LAN Airlines (2007 sale).¹³⁹⁹ As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(b) of the SCM Agreement.¹⁴⁰⁰ Therefore, the EU's claim cannot even arguably be sustained.

940. Moreover, as explained in Section IV.H.4.c.iv, the EU has failed to demonstrate that the 2007 LAN Airlines sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU's threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

iv. China (alleged threat of impedance)

941. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedance;¹⁴⁰¹ it has simply relied on its unsupported premise that Boeing and Airbus would each have a 50 percent market share in the absence of the subsidies at issue, and then alleged that Boeing will make 35 of 45, or 78 percent, of current and future deliveries in this market.¹⁴⁰² As explained above, the SCM Agreement does not permit a panel to make a blanket assumption that market shares should be 50 percent for each of two duopolists in evaluating displacement or impedance. And the EU has cited no actual data to show that Boeing's market share in the Chinese new technology twin-aisle market would be 50 percent in the absence of the subsidies to the 787. The EU was required to demonstrate, with actual evidence, that subsidies to the 787 genuinely and substantially cause the threat of impedance in this market. It has failed to do so.

v. Ethiopia (alleged impedance and threat thereof)

942. The EU is precluded from re-litigating this claim. In the original proceeding, the Appellate Body reversed the original panel's finding of threat of displacement and impedance in the Ethiopian 200-300 seat market (which included the 787) due to an absence of identified clear

¹³⁹⁸ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹³⁹⁹ EU FWS, para. 1590.

¹⁴⁰⁰ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴⁰¹ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴⁰² EU FWS, para. 1592.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 288

trends demonstrating such a threat.¹⁴⁰³ As this issue has been resolved, the EU cannot re-raise it in this compliance proceeding.¹⁴⁰⁴

943. Moreover, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance;¹⁴⁰⁵ it has simply referenced a single alleged lost sale – Ethiopian Airlines (2005 sale).¹⁴⁰⁶ As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(b) of the SCM Agreement.¹⁴⁰⁷ In fact, the Appellate Body reversed the finding of threatened displacement and impedance in the Ethiopian market despite leaving intact the lost sale finding with respect to Ethiopian Airlines (2005).¹⁴⁰⁸ Therefore, the EU's claim cannot even arguably be sustained.

944. And finally, the Appellate Body sustained the original panel's explicit finding that but for the aeronautics R&D subsidies, Airbus would have obtained additional orders for its A330 or Original A350 from customers in third-country markets in Australia, Ethiopia, Kenya, and Iceland.¹⁴⁰⁹ The EU provides no explanation for why a lost sale of A330s or Original A350s in 2005 would support a finding that imports of A350 XWBs are threatened with impedance.

vi. Iceland (alleged threat of impedance)

945. The EU is precluded from re-litigating this claim. In the original proceeding, the Appellate Body reversed the original panel's finding of threat of displacement and impedance in the Icelandic 200-300 seat market (which included the 787) due to an absence of identified clear trends demonstrating such a threat.¹⁴¹⁰ As this issue has been resolved, the EU cannot re-raise it in this compliance proceeding.¹⁴¹¹

946. Moreover, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance;¹⁴¹² it has simply referenced alleged lost sales – Icelandair (2005, 2006 sales).¹⁴¹³ As

¹⁴⁰³ *US – Large Civil Aircraft (AB)*, para. 1127.

¹⁴⁰⁴ See DSU, Art. 17.14; *US – Upland Cotton (21.5) (AB)*, para. 210; *EC – Bed Linen (21.5) (AB)*, para. 98; *Mexico – Corn Syrup (21.5) (AB)*, para. 79.

¹⁴⁰⁵ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴⁰⁶ EU FWS, para. 1590.

¹⁴⁰⁷ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴⁰⁸ See EU FWS, paras. 1068, 1126, 1350(d)(1)(A)(5).

¹⁴⁰⁹ *US – Large Civil Aircraft (AB)*, paras. 1044, 1068.

¹⁴¹⁰ *US – Large Civil Aircraft (AB)*, para. 1127.

¹⁴¹¹ See DSU, Art. 17.14; *US – Upland Cotton (21.5) (AB)*, para. 210; *EC – Bed Linen (21.5) (AB)*, para. 98; *Mexico – Corn Syrup (21.5) (AB)*, para. 79.

¹⁴¹² See *US – Large Civil Aircraft (AB)*, para. 1086.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 289

explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(b) of the SCM Agreement.¹⁴¹⁴ In fact, the Appellate Body reversed the finding of threatened displacement and impedance in the Icelandic market despite leaving intact the lost sale finding with respect to Icelandair (2005, 2006 sales).¹⁴¹⁵ Therefore, the EU's claim cannot even arguably be sustained.

947. And finally, the Appellate Body sustained the original panel's explicit finding that but for the aeronautics R&D subsidies, Airbus would have obtained additional orders for its A330 or Original A350 from customers in third-country markets in Australia, Ethiopia, Kenya, and Iceland.¹⁴¹⁶ The EU provides no explanation for why a lost sale of A330s or Original A350s in 2005 would support a finding that imports of A350 XWBs are threatened with impedance.

vii. India (alleged impedance and threat thereof)

948. The EU alleges that in the so-called Indian new technology twin-aisle market, subsidies to the 787 cause impedance of A350 XWB deliveries and the threat thereof.¹⁴¹⁷ The EU relies on its completely unsupported premise that “{i}n a duopoly environment, and geographic and product markets of substantial size, such as the Indian market, rough parity in the distribution of market shares between the duopolists would be expected.”¹⁴¹⁸ The EU's purported “expectations” cannot substitute for evidence that, absent subsidies, Airbus would have a 50 percent market share in the Indian new technology twin-aisle market. Indeed, the United States certainly believes that that would *not* be the case.

949. After stating its unsupported premise, the EU then argues that “Boeing will make 37 of 42, or 88 percent, of present and future deliveries in this market.”¹⁴¹⁹ The EU cites to Exhibit EU-605, but it does not show how it has compiled those numbers from the data included in the exhibit, which are not organized in a way that supports the EU's assertion. In any event, even if these numbers could be supported, they do not prove impedance. The EU has cited no evidence to show that Airbus's market shares would have been higher in the absence of subsidies to the 787. Under the EU's approach, impedance would be proven in any large LCA market merely by showing that the responding Member's market share exceeds 50 percent. That is neither logically true, nor sufficient under the language of Article 6.3(b) of the SCM Agreement.

¹⁴¹³ EU FWS, para. 1590.

¹⁴¹⁴ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴¹⁵ See EU FWS, paras. 1068, 1126, 1350(d)(1)(A)(5).

¹⁴¹⁶ *US – Large Civil Aircraft (AB)*, paras. 1044, 1068.

¹⁴¹⁷ EU FWS, para. 1598.

¹⁴¹⁸ EU FWS, para. 1598.

¹⁴¹⁹ EU FWS, para. 1598.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 290

viii. Japan (alleged impedance and threat thereof)

950. The EU is precluded from re-litigating this claim. In the original proceeding it alleged displacement and impedance (or threat thereof) in the Japanese 200-300 seat market (which included the 787). However, the EU failed to get a finding from the original panel regarding displacement or impedance in this market as a result of losing its All Nippon Airways (ANA) and Japan Airlines (JAL) lost sales claims.¹⁴²⁰ The EU did not appeal this finding.¹⁴²¹ Therefore, the EU cannot now re-litigate in this compliance proceeding threat thereof in the Japanese market.¹⁴²²

951. Nevertheless, the EU attempts to do just that. Yet, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedance.¹⁴²³ Instead, it relies on its unsupported premise that Boeing and Airbus would each have a 50 percent market share in the absence of the subsidies at issue, and then alleges that Boeing will make 100 percent of current and future deliveries in this market.¹⁴²⁴ The EU also relies on the ANA and JAL lost sales claims that were rejected in the

¹⁴²⁰ The Appellate Body explained it as follows:

We also note that the Panel does not appear to have explicitly reached any finding or conclusion regarding the European Communities' claim that the United States' use of the subsidies at issue has caused displacement and impedance of its exports to the United States, within the meaning of Article 6.3(a) of the *SCM Agreement*, with respect to orders of Airbus' A330 and Original A350 families of LCA, or, in the alternative, threat of displacement or impedance with respect to deliveries of Airbus' A330 and A350XWB-800 families of LCA. Nevertheless, it seems to us that, in finding that factors other than the performance characteristics or the timing of the availability of the 787 led to the decisions of Continental Airlines and Northwest Airlines to purchase Boeing LCA rather than Airbus LCA, the Panel effectively found that the European Communities had not made out this aspect of its claim. (*Ibid.*, para. 7.1786 and footnote 3725 thereto) In any event, the European Union has not appealed the lack of an explicit finding by the Panel in this regard.

US – Large Civil Aircraft (AB), note 82. The ANA and JAL significant lost sales were disposed of by the original panel (and are otherwise indistinguishable) from the Continental and Northwest sales. See *US – Large Civil Aircraft*, para. 7.1786, notes 3724-3725.

¹⁴²¹ See *US – Large Civil Aircraft (AB)*, note 82.

¹⁴²² See DSU, Art. 17.14; *US – Upland Cotton (21.5) (AB)*, para. 210; *EC – Bed Linen (21.5) (AB)*, para. 98; *Mexico – Corn Syrup (21.5) (AB)*, para. 79.

¹⁴²³ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴²⁴ EU FWS, para. 1600.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 291

original proceeding (and follow-on orders to those sales).¹⁴²⁵ Neither argument is sufficient to even make out a *prima facie* case.

952. As explained above, the SCM Agreement does not permit a panel to make a blanket assumption that market shares should be 50 percent for each of two duopolists in evaluating displacement or impedance. And the EU has cited no actual data to show that Boeing's market share in the Japanese new technology twin-aisle market would be 50 percent in the absence of the subsidies to the 787 at issue.

953. Furthermore, as discussed in Section IV.H.4.b.i above, the EU cannot re-litigate the ANA and JAL lost sales. Thus, because the EU's impedance and threat of impedance claim is a consequence of those alleged lost sales claims that were already rejected in the original proceeding, the impedance and threat claim necessarily fails.

954. The EU was required to demonstrate, with actual evidence, that subsidies to the 787 genuinely and substantially cause the threat of impedance in this market. It has failed to do so.

ix. Kenya (alleged threat of impedance)

955. The EU is precluded from re-litigating this claim. In the original proceeding, the Appellate Body reversed the original panel's finding of threat of displacement and impedance in the Kenyan 200-300 seat market (which included the 787) due to an absence of identified clear trends demonstrating such a threat.¹⁴²⁶ As this issue has been resolved, the EU cannot re-raise it in this compliance proceeding.¹⁴²⁷

956. Moreover, the EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedance;¹⁴²⁸ it has simply referenced alleged a single lost sale – Kenya Airways (2006).¹⁴²⁹ As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(b) of the SCM Agreement.¹⁴³⁰ In fact, the Appellate Body reversed the finding of threatened displacement and impedance in the Kenyan market despite leaving intact the lost sale finding with respect to Kenya Airways (2006).¹⁴³¹ Therefore, the EU's claim cannot even arguably be sustained.

¹⁴²⁵ See EU FWS, para. 1354, 1364-1365, 1602.

¹⁴²⁶ *US – Large Civil Aircraft (AB)*, para. 1127.

¹⁴²⁷ See DSU, Art. 17.14; *US – Upland Cotton (21.5) (AB)*, para. 210; *EC – Bed Linen (21.5) (AB)*, para. 98; *Mexico – Corn Syrup (21.5) (AB)*, para. 79.

¹⁴²⁸ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴²⁹ EU FWS, para. 1604.

¹⁴³⁰ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴³¹ See *US – Large Civil Aircraft (AB)*, paras. 1068, 1126, 1350(d)(1)(A)(5).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 292

x. Mexico (alleged threat of impedance)

957. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedance;¹⁴³² it has simply referenced a single alleged lost sale – Aeromexico (2012 sale).¹⁴³³ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁴³⁴ Therefore, the EU’s claim cannot even arguably be sustained.

958. Moreover, as explained in Section IV.H.4.c.x, the EU has failed to demonstrate that the 2012 Aeromexico sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

xi. Qatar (alleged impedance and threat thereof)

959. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance;¹⁴³⁵ it has simply referenced a single alleged lost sale – Qatar Airways (2007 sale).¹⁴³⁶ As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under Article 6.3(b) of the SCM Agreement.¹⁴³⁷ Therefore, the EU’s claim cannot even arguably be sustained.

960. Moreover, as explained in Section IV.H.4.c.i, the EU has failed to demonstrate that the 2007 Qatar Airways sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

xii. UAE (alleged threat of impedance)

961. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate impedance or threat of impedance;¹⁴³⁸ it has simply referenced alleged lost sales – Etihad (2008, 2011 sales).¹⁴³⁹ As explained above, the Appellate Body has made clear that this is insufficient to show impedance or threat thereof under

¹⁴³² See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴³³ EU FWS, para. 1606.

¹⁴³⁴ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴³⁵ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴³⁶ EU FWS, para. 1608.

¹⁴³⁷ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴³⁸ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴³⁹ EU FWS, para. 1610.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 293

Article 6.3(b) of the SCM Agreement.¹⁴⁴⁰ Therefore, the EU’s claim cannot even arguably be sustained.

962. Moreover, as explained in Section IV.H.4.c.vii, the EU has failed to demonstrate that the 2008 and 2011 Etihad sales constitute lost sales under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of those alleged lost sales, it necessarily fails.

xiii. Indonesia (alleged threat of impedance)

963. The EU has provided no evidence of clear trends in the development of the market over a representative period that could arguably demonstrate threat of impedance;¹⁴⁴¹ it has simply referenced a single alleged lost sale – Lion Air (2012 sale).¹⁴⁴² As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁴⁴³ Therefore, the EU’s claim cannot even arguably be sustained.

964. Moreover, as explained in Section IV.H.4.c.xi, the EU has failed to demonstrate that the 2012 Lion Air sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

xiv. Australia

965. In the original proceedings, the panel and the Appellate Body found that the subsidies to Boeing caused a threat of displacement in Australia. The EU’s argument regarding threat of displacement in the Australia third-country market is limited to the following two sentences in the introduction to a section on impedance and threat of impedance:

The United States has failed to remove that threat of displacement because there continues to be outstanding deliveries of 787 family LCA to Qantas under the order that formed the basis for this finding in the original proceedings. These future deliveries will displace EU exports to Australia.¹⁴⁴⁴

966. This is woefully inadequate to demonstrate continued threat of displacement.

967. The EU argues that, “{a}lthough deliveries have not yet commenced for the A350XWB, 787 deliveries have begun to some of these country markets, establishing present impedance.”¹⁴⁴⁵

¹⁴⁴⁰ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴⁴¹ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁴⁴² EU FWS, para. 1612.

¹⁴⁴³ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁴⁴⁴ *US – Large Civil Aircraft (AB)*, para. 1569.

¹⁴⁴⁵ EU FWS, para. 1582.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 294

This is incorrect. Impedance must be based on deliveries. The A350 XWB is simply not ready and could not possibly have been delivered in greater numbers to any market. Therefore, it is clear that the A350 XWB has not suffered from impedance in any market.

I. The EU Has Failed to Demonstrate that Alleged Subsidies to the 737 MAX Cause Adverse Effects in the Form of Significant Price Suppression, Significant Lost Sales, Impedance, or Threat of Impedance With Respect to the A320neo.

968. The EU makes two remarkable allegations regarding competitive harm to the A320neo from alleged subsidization of the 737 MAX. First, the EU asserts that U.S. R&D subsidies enabled Boeing to upgrade the 737NG to the 737 MAX – despite the facts that the upgrade involved improved *engine* technology, which is outside the scope of this dispute; that the *same engine technology was also deployed by Airbus* on its own re-engined single-aisle aircraft (A320neo); and that Airbus completed its own parallel upgrade nine months *before* Boeing did. Second, the EU asserts that certain subsidies translated into lower pricing on the 737 MAX – despite the fact that the magnitude of those subsidies that could even theoretically have affected pricing is extremely small and non-material in the context of LCA competition. (Recall that FSC/ETI, which anchored the panel’s original findings on price effects causation in the single-aisle market, was long ago withdrawn and, in any event, has not been taken by Boeing since 2006).

969. The United States shows in more detail below the fallacies in the EU’s adverse effects case in this asserted market. We begin by rebutting the EU’s causation theories in the context of 737 MAX-A320neo competition. We then go on to explain why, both in light of its failed causation theories and other evidence, the EU has failed to demonstrate the existence of the particular adverse effects claimed by the EU – significant price suppression, significant lost sales, and threat of impedance.

1. Causation

970. In this section, the United States refutes the EU arguments that alleged subsidies to the 737 MAX cause present serious prejudice through technology effects and price effects causal mechanisms.

a. Alleged Technology Effects

971. Boeing launched the 737 MAX in August 2011,¹⁴⁴⁶ nine months after Airbus began offering the A320neo in December 2010.¹⁴⁴⁷ The EU alleges that, absent certain U.S. R&D subsidies, Boeing would have lacked the technology to develop 737 MAX as it did and would not enjoy “a significant timing advantage over Airbus by launching the 737 MAX in 2011.”¹⁴⁴⁸

¹⁴⁴⁶ 737 Family – The New Boeing 737 MAX Family – Efficiency, Reliability, Passenger Appeal, Boeing Website (Exhibit EU-617).

¹⁴⁴⁷ Airbus Offers New Fuel Saving Engine Option for A320 Family, Airbus (Dec. 1, 2010) (Exhibit USA-).

¹⁴⁴⁸ EU FWS, para. 1620.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 295

The EU is asking the Panel to accept a *but for* counterfactual in which, after both Boeing and Airbus studied the costs and benefits of re-engining their single-aisle aircraft,¹⁴⁴⁹ and *nine months after* Airbus began offering customers the A320neo, Boeing would have needed a “multi-year”¹⁴⁵⁰ period of additional research before it could modify the design of its long-standing 737 to accommodate one of the engines Airbus offers on the A320neo. This argument is implausible on its face; it is also contradicted by the evidence.

972. As the Boeing engineers explain, “{t}he development of the 737 MAX has been driven by improvements in engine technology made by engine manufacturers such as CFM and Pratt & Whitney, and by Airbus’ decision to re-engine the A320.”¹⁴⁵¹ For years before the 737 MAX’s launch, Boeing had been evaluating the merits of a re-engined 737 (or 737RE) against an all-new single-aisle aircraft. Boeing engineers recount the 737RE work:

Starting in [BCI] Boeing considered that improvements in engine technology had advanced to the point where a re-engined 737 might be viable, and began intensive product development studies and testing on what was known internally as the 737RE. All of this work was internally funded. It included wind tunnel tests at Boeing’s Transonic Wind Tunnel in Seattle to evaluate engine installation configurations. [BCI]¹⁴⁵²

973. Based on its product studies, Boeing’s preference had been to pursue an all-new design, but this changed when Airbus threatened to “flip” strategic all-Boeing customers over to the A320neo:

Things changed during the American Airlines single-aisle sales campaign in mid-2011. With Airbus offering the A320neo, Boeing faced the threat of losing the single-aisle business of a strategic customer that for decades had operated an all-Boeing fleet. In response, Boeing found it necessary to match the A320neo with a re-engined 737. [BCI] Boeing was able to make MAX commitments to American Airlines in July 2011.¹⁴⁵³

974. Boeing’s ability to respond to the A320neo with the 737 MAX had nothing to do with the subsidy technology effects alleged by the EU. As demonstrated below, the EU bases its claims in part on a purported “new subsidy” to Boeing that, in actuality, was a NASA study in which Boeing had no involvement. The EU also alleges spillover effects from the 787 that are factually inaccurate. Contrary to the EU’s assertions, the 737 MAX engine integration/coupling was not

¹⁴⁴⁹ *Boeing and Airbus Waver on Reworking Their Smaller Jets*, Christopher Drew and Jad Mouawad, *New York Times* (Nov. 16, 2010) (Exhibit USA-285).

¹⁴⁵⁰ EU FWS, para. 1620.

¹⁴⁵¹ Boeing Engineers Statement, para. 44 (Exhibit USA-283(BCI)).

¹⁴⁵² Boeing Engineers Statement, para. 44 (Exhibit USA-283(BCI)).

¹⁴⁵³ Boeing Engineers Statement, para. 47 (Exhibit USA-283(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 296

designed with reference to the 787, but rather with reference to the 737NG and to a lesser extent the 777, in conjunction with earlier Boeing research on [BCI]. Moreover, the EU’s claims of spillover effects from the 787 on the tail cone are based on superficial similarity. Boeing’s engineers explain that, even if the 787 did not exist, the 737 MAX tail cone would have been designed identically in the same time frame. The same is true with respect to the fly-by-wire spoilers. And these alleged spillover effects are irrelevant in any event because, absent R&D subsidies, Boeing would still have launched the 787 well before Boeing would have referred to it in developing the 737 MAX. The final two alleged new subsidies are a strained and inaccurate attempt to link the flight displays on the 737 MAX to the DoD KC-46 tanker program, and an allegation regarding the FAA CLEEN 2012 ecoDemonstrator flight program despite that there is no technology cited by the EU that is being tested under the Boeing CLEEN OTA that will be applied on the 737 MAX.

i. Alleged New Subsidy Effects – NASA Subsonic Fixed Wing Project

975. The EU alleges that Boeing research under NASA’s Subsonic Fixed Wing project on the “Multi-Objective Optimization of a Turbofan for an Advanced, Single-Aisle Transport” helped the company settle on re-engining the 737 with new turbofan engines.¹⁴⁵⁴ The EU is mistaken, both as to the premise of its allegation and to the effects of this study.

976. Boeing did not conduct research under the “Multi-Objective Optimization of a Turbofan for an Advanced, Single-Aisle Transport.”¹⁴⁵⁵ The document the EU and Mr. Domke of Airbus rely on for this argument is *a NASA study by NASA employees Jeffrey Berton and Mark Guynn*, which used public data on Boeing’s 737NG aircraft.¹⁴⁵⁶ As Boeing engineers observe:

it was a project conceived and conducted by NASA from beginning to end. Boeing did not conduct any research under this project. Having reviewed the report summarizing the project’s findings, Mr. Domke of Airbus knows as much about it as Boeing does.¹⁴⁵⁷

Obviously, there can be no subsidy technology effects from a project that did not involve Boeing.

977. The EU’s error with this subsidy underscores the peril of its strategy of reading NASA reports after the fact, comparing them to technologies on Boeing aircraft, and assuming that

¹⁴⁵⁴ EU FWS, para. 1095-1096.

¹⁴⁵⁵ Boeing Engineers Statement, para. 49 (Exhibit USA-283(BCI)).

¹⁴⁵⁶ See EU FWS, para. 1095 (citing Multi-Objective Optimization of a Turbofan for an Advanced, Single-Aisle Transport, Jeffrey J. Berton and Mark D. Guynn, NASA (Apr. 2012) (Exhibit EU-666)).

¹⁴⁵⁷ Boeing Engineers Statement, para. 50 (Exhibit USA-283(BCI)). Scientists preparing documents of this nature usually thank other scientists who have reviewed their work or provided other input. The absence of any Boeing employees from the acknowledgement page of the NASA study confirms that Boeing played no role in that project.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 297

similarities demonstrate a causal connection. The idea that a NASA study released in April 2012 was instrumental in the decision to offer the 737 to American Airlines in July 2011 also ignores commercial reality. This is emblematic of the EU’s failure to demonstrate genuine and substantial causal connections.

978. In reality, with Airbus threatening to take some of its largest customers, Boeing did not need any U.S. Government help in deciding to proceed with the 737 MAX:

we did not use, and did not need, this project to inform our views of the relative merits of re-engining the 737 versus pursuing a clean-sheet design. As one would expect, Boeing consulted closely with its engine suppliers during the 2000s to understand advances in engine technology. We did not need a NASA study to know that a new generation high-bypass turbofan engine would increase the performance of the 737, or to assess the trade-offs between a re-engined 737 and a clean-sheet design. After focusing on an all-new single-aisle replacement aircraft, we chose to re-engine the 737 not because of any study but because we needed a near-term response to Airbus’ use of the A320neo to flip Boeing customers.¹⁴⁵⁸

Accordingly, the Panel should reject this EU argument.

ii. Alleged “Spillover Effects” – Engine Integration/Coupling

979. The EU contends that Boeing’s engine integration design on the 737 MAX was enabled by (a) TRANAIR and OVERFLOW computation fluid dynamics (“CFD”) codes that were developed and enhanced under several NASA programs (HSR, AST, HPCC, and R&T Base), and (b) “the close coupling of the engines to the wing, using new nacelles and new pylons, which Boeing had developed previously for its 787.”¹⁴⁵⁹ Not only does the evidence not support these arguments, it contradicts them.

980. Boeing’s engine integration design for the 737 MAX was one of the means by which the aircraft can accommodate the new CFM LEAP engine, which has a larger fan diameter than the CFM engine on the current 737NG.¹⁴⁶⁰ A close-coupled engine installation is one that places the engine and nacelle closer to the wing’s leading edge, as compared to other configurations. As Boeing engineers observe, “{t}he 737 MAX installation is the closest coupled commercial design in the industry to date.”¹⁴⁶¹ The EU attempts to link this design to the 787, but [BCI]¹⁴⁶² Rather, Boeing’s primary reference points for the 737 MAX engine installation “were the

¹⁴⁵⁸ Boeing Engineers Statement, para. 51 (Exhibit USA-283(BCI)).

¹⁴⁵⁹ EU FWS, para. 1047.

¹⁴⁶⁰ Boeing Engineers Statement, para. 53 (Exhibit USA-283(BCI)).

¹⁴⁶¹ Boeing Engineers Statement, para. 54 (Exhibit USA-283(BCI)).

¹⁴⁶² Boeing Engineers Statement, para. 55 (Exhibit USA-283(BCI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 298

production configurations of the 737NG and to a lesser degree the 777, along with earlier work [BCI]¹⁴⁶³

981. Even if the 787 had a genuine relationship with the 737 MAX’s engine installation, this would not support the EU’s technology effects argument. As discussed above, absent the R&D subsidies to the 787, Boeing would still have launched the 787 by 2006 at the latest – well before Boeing would have referred to it in developing the 737 MAX.¹⁴⁶⁴ Thus, a counterfactual analysis confirms that there is no causal relationship between the R&D subsidies to the 787 and the design of the 737 MAX engine integration/coupling.

iii. Alleged “Spillover Effects” – Tail Cone

982. According to the EU, Boeing used CFD codes developed on the 787 to design the lower-drag 737 MAX tail cone in a manner similar to that of the 787.¹⁴⁶⁵ The Boeing engineers explain why the EU’s allegations are erroneous, mistaking a superficial similarity in the conical tail cones of the 737 MAX and 787 for technology spillover:

Boeing has decades of experience designing and producing conical tail cones. Over the years, the tail cones on Boeing’s commercial aircraft have varied from the conical shapes on the 757 and 767, as well as the 787, to the blade-like shape on the 777. The 737NG represents a hybrid between cone and blade. On the 737 MAX, Boeing returned to the conical shape as part of improvements to the aft body designed to improve the steadiness of air flow and eliminate the need for vortex generators on the tail. The basis for the final 737 MAX tail cone design was [BCI] if the 787 did not exist, we would still have designed the 737 MAX tail cone as it is, in the same timeframe.¹⁴⁶⁶

983. As with its other technology spillover arguments, the EU’s tail cone allegation would be irrelevant even if it were true. Absent the R&D subsidies to the 787, Boeing would still have launched the 787 by 2006 at the latest – well before Boeing would have referred to it in developing the 737 MAX.¹⁴⁶⁷ Thus, a counterfactual analysis confirms that there is no causal relationship between the R&D subsidies to the 787 and the design of the 737 MAX tail cone.

iv. Alleged “Spillover Effects” – Fly-by-Wire Spoilers

984. The EU alleges that Boeing’s participation in the NASA R&T Base, HSR, and Aviation Safety programs enabled it to develop FBW spoilers on the 787, which serves as the basis for its

¹⁴⁶³ Boeing Engineers Statement, para. 54 (Exhibit USA-283(BCI)).

¹⁴⁶⁴ Boeing Engineers Statement, paras. 55, 69 (Exhibit USA-283(BCI)).

¹⁴⁶⁵ EU FWS, paras. 1053-1056.

¹⁴⁶⁶ Boeing Engineers Statement, para. 58 (Exhibit USA- USA-283(BCI)).

¹⁴⁶⁷ Boeing Engineers Statement, para. 69 (Exhibit USA-283(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 299

use of FBW spoilers on the 737 MAX.¹⁴⁶⁸ Once again, the EU is making an allegation that is both inaccurate and legally irrelevant. As the Boeing engineers explain:

The FBW wire system on the 737 MAX is very different from that of the 787, in terms of its extent, its systems architecture, and its suppliers. As Mr. Domke recognizes, the 737 MAX FBW system is partial, applied only on [BCI], rather than all, of the aircraft’s spoilers. The system architecture more closely derives from the analog FBW spoiler technology on the 767. The actuators are supplied by [BCI]. In contrast, the 787 uses a different, digital FBW system on all spoilers, with actuators supplied by Moog. The 787 system also includes a vertical gust suppression droop spoiler that is not on the 737 MAX. If the 787 did not exist, we would still have designed the 737 MAX FBW system exactly as it is.¹⁴⁶⁹

985. Even if there were a genuine connection between the FBW spoiler systems of the 737 MAX and 787, absent the R&D subsidies to the 787, Boeing would still have launched the 787 well before Boeing would have referred to it in developing the 737 MAX.¹⁴⁷⁰ Thus, a counterfactual analysis confirms that there is no causal relationship between the R&D subsidies to the 787 and the design of the 737 MAX fly-by-wire spoilers.

v. Alleged New Subsidy Effects – Flight Deck Displays

986. The EU’s allegation regarding the 737 MAX’s primary flight deck displays is a strained attempt to link the DoD KC-46 tanker program to this dispute. According to the EU, the 737 MAX “will make use of the same large-format multifunction primary displays that Boeing integrated into the KC-46 tanker, thus reusing a solution developed with DoD RDT&E funding.”¹⁴⁷¹ However, the evidence cited by the EU makes clear that the flow of technology is from civil to military, with the display technology from the 787 being incorporated into the KC-46 and its civilian counterpart, the 767, along with the 757:

The decision to incorporate 787 flightdeck technology into the KC-46A was the catalyst for the 757/767 cockpit upgrade, says Colin Mahoney, vice president of sales, marketing and support for Rockwell Collins Commercial Systems.

¹⁴⁶⁸ EU FWS, paras. 1057-1060.

¹⁴⁶⁹ Boeing Engineers Statement, para. 58 (Exhibit USA-283(BCI)).

¹⁴⁷⁰ Boeing Engineers Statement, para. 69 (Exhibit USA-283(BCI)).

¹⁴⁷¹ EU FWS, para. 1097; *see also Impacted of Selected NASA/DOD-supported 787 Technologies and Recent US R&D Programmes on Boeing’s Post-2007 LCA Developments*, Burkhard Domke, para. 161 (Mar. 2013) (Exhibit EU-31(HSBI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 300

The flightdeck upgrade will replace the 767's six portrait-format cathode ray-tube displays with three large, landscape-format liquid-crystal displays from the 787, each providing two independent display windows.¹⁴⁷²

987. Display technology from the 787 is also being used on the 737 MAX, but as Boeing engineers explain, there is no connection between the 737 MAX and KC-46 DoD RDT&E funding:

The 737 MAX primary displays are derived from the displays developed for the 787 by Boeing and our supplier Rockwell Collins without any U.S. Government funding. The 787 displays also served as the basis for the KC-46 displays, but there was absolutely no transfer of technology or learning from the KC-46 displays to those on the 737 MAX. In fact, the 737 MAX and KC-46 displays are different devices. The KC-46 displays are designed to interact with military night vision systems, while those on the 737 MAX are not. Indeed, the 737 MAX could not incorporate KC-46 display technology because of U.S. ITAR rules.¹⁴⁷³

988. Accordingly, there is no causal connection between DoD RDT&E funding for the KC-46 and the 737 MAX.

*vi. Alleged New Subsidy Effects – Testing under the FAA CLEEN
2012 ecoDemonstrator Program*

989. The EU alleges that Boeing's participation in the FAA CLEEN 2012 ecoDemonstrator flight program allowed it to test and mature various technologies that it intends to apply on the 737 MAX: adaptive trailing wing edges; a variable area fan nozzle ("VAFN"); RFID devices; and a modified winglet.¹⁴⁷⁴ In fact, there is no technology cited by the EU that is being tested under the Boeing CLEEN OTA that will be applied on the 737 MAX, nor has there been any testing under CLEEN that showed Boeing what *not* to apply on the MAX. As Boeing engineers explain:

The European Union and Mr. Domke apparently misunderstand the nature of Boeing's participation in the FAA CLEEN ecoDemonstrator program. Boeing is supplying a pre-delivery 737-800 as a test bed for flight testing of various technologies, but only some of the technologies on this aircraft are tested under an FAA CLEEN contract. Others are tested at Boeing's prerogative and expense. None of the Boeing technologies that the European Union and Mr. Domke link to CLEEN are both tested under a CLEEN contract *and* evaluated for use on the 737 MAX.

¹⁴⁷² *Boeing's KC-46A Tanker Sparks 767 Cockpit Upgrade*, Graham Warwick, Aviation Week Farnborough Air Show 2012 Blog (July 10, 2012) (Exhibit EU-342).

¹⁴⁷³ Boeing Engineers Statement, para. 62 (Exhibit USA-283(BCI)).

¹⁴⁷⁴ EU FWS, paras. 1091-1094.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 301

Boeing's proprietary VFAN technology on the 737-800 test bed is not being tested pursuant to a CLEEN contract, and it [**BCI**]

Similarly, Boeing's proprietary adaptive trailing wing edge technology [**BCI**]

Testing of RFID devices is also not being done under a CLEEN contract, and [**BCI**].¹⁴⁷⁵

Finally, the 737 MAX will incorporate a new, multi-spar winglet that Boeing developed at its own expense, but it is not being demonstrated on the 737-800 test bed under a CLEEN contract.

990. The Panel should therefore reject the EU's attempts to link the CLEEN program to the 737 MAX.

vii. Conclusion

991. As shown above, the EU has failed to demonstrate either a genuine or a genuine and substantial causal relationship between the alleged technology effects of U.S. R&D programs and the development and availability of the 737 MAX.

b. Alleged Price Effects

992. As with the 787, the EU fails to undertake any detailed showing that subsidies to the 737 MAX are a genuine and substantial cause of adverse effects through a price causal mechanism.¹⁴⁷⁶ Instead, the EU again refers back to its price causal mechanism section, which discussed the three separate aggregated groups of subsidies, but provided no analysis of any of those groups that was specific to the 737 MAX or the A320neo.¹⁴⁷⁷ This is insufficient to make out a *prima facie* case that the subsidies alleged to benefit the 737 MAX have a genuine and substantial causal relationship with the alleged adverse effects through a price causal mechanism.

993. In any event, a more thorough analysis of the three aggregated groups of subsidies specific to the EU's "new technology single-aisle" market demonstrates that no adverse effects can possibly result from subsidies through a price causal mechanism.

994. **R&D subsidies.** As explained in Section IV.C, the EU cannot re-litigate the unappealed finding that price effects cannot be attributed to the R&D subsidies acting through a technology effects causal mechanism.

995. **Tied tax subsidies.** The EU has failed to demonstrate that the tied tax subsidies to the 737 MAX cause adverse effects, particularly when viewed in the context of the particular

¹⁴⁷⁵ Boeing Engineers Statement, paras. 64-68 (Exhibit USA-283(BCI)).

¹⁴⁷⁶ See EU FWS, paras. 1626-1629.

¹⁴⁷⁷ See EU FWS, paras. 1112-1192, 1626.

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 302

subsidies, products, and market at issue here.¹⁴⁷⁸ The EU’s generalized assessment of the price effects attributable to tied tax subsidies is based on an aggregated group that includes FSC/ETI, the Washington State and City of Everett B&O tax rate reductions, and the South Carolina apportionment agreement. However, three of those four have nothing to do with the 737. The EU does not even allege that the Everett B&O tax rate reduction has a causal relationship to the effects in the EU’s 737 MAX/A320neo market.¹⁴⁷⁹ (Since the 737 is not made in Everett, the Everett B&O tax has no effect on it.) Similarly, even if the South Carolina apportionment were properly in this proceeding, which is not the case, it would have no effect on the 737, which is not produced in South Carolina.¹⁴⁸⁰ The EU also appears to concede that FSC/ETI – which in any event has been withdrawn – does not impact the 737 MAX.¹⁴⁸¹ Thus, the EU’s effort at an aggregated analysis of all four subsidies is simply irrelevant to the EU’s “new technology single-aisle market,” where only one of the four is even applicable.

996. In isolation, the Washington B&O tax – the only tied tax subsidy even alleged to benefit the 737 MAX is clearly too small to have a substantial causal relationship to the alleged adverse effects. As the data provided by the State of Washington show, Boeing’s average annual amount saved from the Washington B&O tax rate reduction from 2007-2012 was \$[BCI].¹⁴⁸² And some of this must be allocated to 787 sales and 737NG sales, which are also alleged to benefit from the Washington B&O tax reduction subsidies.

997. The EU’s lost sales claims in this compliance proceeding alone incorporate at least 1,057 sales of the 737 MAX, in addition to at least 347 sales of the 787 and 410 sales of the 737NG.¹⁴⁸³ Thus, an extremely conservative approach would allocate the Washington B&O tax rate reduction over 1,830 aircraft, or 305 per year. That works out to about \$[BCI] per aircraft, or [[HSBI]] percent of the \$[[HSBI]] average net 737 MAX purchase price using data from the campaigns identified by the EU for the Panel’s Article 13 request.¹⁴⁸⁴ Of course, if more were allocated to some campaigns – perhaps the more expensive 787s – that leaves even less to be allocated to 737 MAX sales. This is not meant to be a precise calculation, but it leaves no doubt that the magnitude of the subsidies at issue is not in the vicinity of what would be necessary to have a substantial relationship with the alleged market phenomena through the lowering of 737 MAX prices. Accordingly, the EU’s suggestion that the tied tax subsidies cause adverse effects in its “new technology single-aisle market” fails.

¹⁴⁷⁸ See *US – Large Civil Aircraft (AB)*, para. 1193.

¹⁴⁷⁹ See EU FWS, para. 1135.

¹⁴⁸⁰ See EU FWS, para. 1135.

¹⁴⁸¹ See EU FWS, para. 1135.

¹⁴⁸² See *Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations (Exhibit USA-295(HSBI))*.

¹⁴⁸³ See *Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations (Exhibit USA-295(HSBI))*.

¹⁴⁸⁴ See *Information Responding to Panel Question 87, parts (c) and (f) (Exhibit USA-295(HSBI))*.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 303

998. Finally, the EU has failed to demonstrate that the miscellaneous subsidies to the 737 MAX cause adverse effects. The EU's generalized assessment of the price effects attributable to the miscellaneous subsidies (*i.e.*, those that are not R&D subsidies and are not tied tax measures) is based on an aggregated group that includes: (i) City of Wichita IRBs; (ii) Washington untied tax breaks and incentives (*i.e.*, Washington B&O tax credits for preproduction development and property taxes, Washington sales and use tax exemptions for computer hardware, software, and peripherals and Washington B&O tax credits for leasehold excise taxes on property and buildings leased from the Washington government and used to manufacture airplanes); (iii) Washington funding and facilities support through the JCATI; and (iv) South Carolina packages of tax, infrastructure, training, and other subsidies through Projects Gemini and Emerald.¹⁴⁸⁵

999. But the only miscellaneous subsidy the EU alleges to be linked to the 737 MAX is the Wichita IRBs.¹⁴⁸⁶ And even that contention consists of nothing more than unsupported speculation that the Wichita IRBs' links to the 737NG will apply equally to the 737 MAX.¹⁴⁸⁷ Even if that were the case, the Wichita IRBs, as in the original proceeding, can only cause adverse effects if their effects are cumulated with other subsidies' effects.¹⁴⁸⁸ However, as discussed above, with FSC/ETI withdrawn, the tied tax subsidies are no longer a substantial cause of any adverse effects. Therefore, there is no anchor group of subsidies for the Wichita IRBs to complement and supplement.

1000. Moreover, even the EU's calculations put the Wichita IRBs at a value of \$53.53 million from 2007-2012, or \$8.9 million per year.¹⁴⁸⁹ The EU alleges that the Wichita IRBs impact 737NG pricing as well as 737 MAX pricing. The EU's lost sales claims in this compliance proceeding alone incorporate at least 1,057 sales of the 737 MAX and 410 sales of the 737NG.¹⁴⁹⁰ This is a total of 1,467 aircraft, or 245 aircraft per year. Allocating the Wichita IRBs over these aircraft works out to about \$36,000 per aircraft, or **[[HSBI]]** of the **[[HSBI]]** average net 737 MAX purchase price using data from the campaigns identified by the EU for the Panel's Article 13 request.¹⁴⁹¹ Clearly, even accepting the EU's valuation of the Wichita IRBs, they are not a (genuine and) substantial cause of 737 MAX lost sales. Accordingly, none of the miscellaneous subsidies can be found to cause adverse effects in the EU's 737 MAX/A320neo market.

¹⁴⁸⁵ EU FWS, para. 1155.

¹⁴⁸⁶ EU FWS, paras. 1164-1167.

¹⁴⁸⁷ EU FWS, para. 1164.

¹⁴⁸⁸ See EU FWS, paras. 1174-1175.

¹⁴⁸⁹ EU Summary of Subsidies to Boeing's LCA Division, p. 1 (Exhibit EU-35).

¹⁴⁹⁰ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI)).

¹⁴⁹¹ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 304

2. Significant Price Suppression

1001. The EU alleges that alleged subsidies to the 737 MAX presently cause significant price suppression with respect to the A320neo through technology effects and price effects causal mechanisms.¹⁴⁹² The EU’s arguments fail for several reasons.

a. Causation

1002. The EU’s claim of significant price suppression after the compliance deadline is unsupported by the requisite causal link, whether under its technology effects theory or its price effects theory. As the United States demonstrates above, the 737 MAX, and its technology, would have been available to customers well before the compliance deadline absent the alleged subsidies, such that there can be no present subsidy technology effects. Regarding price effects, the magnitude of the alleged subsidies that could properly be considered, when properly calculated and then measured under conservative assumptions, is grossly insufficient to be a genuine and substantial cause of significant price suppression.

b. Pricing Data

1003. Before discussing the substantive aspects of the pricing data, the United States notes that the EU failed to comply with the Panel’s Article 13 request for order price information. Question 6 of the Panel’s request asked for “average pricing information for each of the Airbus . . . A319neo . . . A320neo . . . A321neo . . .”, yet the EU chose to provide A320neo order pricing data on an aggregated family basis.¹⁴⁹³ This failure to provide the requested data prevents the Panel from assessing the EU’s claims on the basis of information that it found was necessary and appropriate for the task.

1004. Nonetheless, the pricing data that is available fail to support, and even contradict, the EU’s price suppression claim. Under the EU theory, the A320neo was in a monopoly market, obtaining monopoly prices, from its introduction in December 2010 until the 737 MAX was first offered in July 2011 (followed by official launch in August 2011).¹⁴⁹⁴ Accordingly, the 2011 pricing data for the A320neo should, to a large extent,¹⁴⁹⁵ reflect monopoly pricing levels, [BCI]¹⁴⁹⁶ The EU characterizes A320neo prices as [BCI]¹⁴⁹⁷ Accordingly, these EU arguments fail to establish price suppression, let alone price suppression that is “significant.”

¹⁴⁹² See EU FWS, paras. 1799-1804.

¹⁴⁹³ See EU Responses to Article 13 Questions (Feb. 28, 2013), Question 6; see also EU FWS, para. 1286.

¹⁴⁹⁴ See EU FWS, para. 896, 900.

¹⁴⁹⁵ See Mourey Statement, para. 84 (Exhibit EU-34(BCI)) (referring to a “substantial number of orders” obtained by the A320neo before Boeing introduced the 737 MAX).

¹⁴⁹⁶ See Price Per Seat Evolution of Net Order Intakes of A330, A320ceo, and A350 XWB family LCA (Exhibit EU-690(BCI)).

¹⁴⁹⁷ EU FWS, para. 1802.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 305

c. Non-Subsidy Factors

1005. The EU does not account for non-subsidy factors concerning A320neo pricing, including the following.

1006. First, the EU fails to account for competition from the A320ceo and 737NG. Mr. Mourey of Airbus describes a demand-side substitution relationship – *i.e.*, competition – between these aircraft when he notes that customers will substitute the A320ceo and 737NG for the A320neo and 737 MAX to the extent the latter are unavailable.¹⁴⁹⁸ The A320ceo and 737NG therefore constrain A320neo prices, yet the EU, to the extent it could show that *any* product or products were suppressing A320neo prices, provides no basis for its assertion that all suppression is attributable to the 737 MAX.

1007. Second, Airbus [[HSBI]] Contrary to the EU’s claims of aggressive 737 MAX pricing, the campaign-specific evidence shows Airbus [[HSBI]]¹⁴⁹⁹ [[HSBI]]¹⁵⁰⁰.

1008. Third, the EU fails to account for existing Boeing customer relationships, which the original panel found can prevent the EU from establishing the causal link required for an adverse effects finding.¹⁵⁰¹ The EU cites campaign-specific evidence as if it supports its price suppression claim,¹⁵⁰² but it unwittingly highlights Boeing customer relationships as a compelling reason to reject its claim. In its price suppression arguments, the EU refers to evidence from seven sales campaigns: Aeromexico, American Airlines, GOL, Norwegian Air Shuttle, Silkair, Southwest Airlines, and United Airlines. Of these, all but one (United Airlines), involved an existing all-Boeing customer with 737s already in its fleet. Moreover, American Airlines and Southwest Airlines have for decades been two of Boeing’s largest, most important customers. Prying these customers away from Boeing necessarily required offering the A320neo on more attractive terms than would be the case where Boeing was not the incumbent. Indeed, the EU recognizes the challenge faced by Airbus in trying to take Boeing’s customers when it states that “even American Airlines, a long-time all-Boeing customer, placed an order with Airbus for 130 A320neo aircraft.”¹⁵⁰³ Notably, [[HSBI]]¹⁵⁰⁴ It is Airbus’s choice whether to pursue major Boeing customers, but the effects of such a strategy must not be attributed to the alleged subsidies.

1009. In light of the above demonstration, the Panel should reject the EU’s claim of significant price suppression regarding the 737 MAX.

¹⁴⁹⁸ Mourey Statement, paras. 91-92 (Exhibit EU-34(BCI)).

¹⁴⁹⁹ [[HSBI]] (Exhibit EU-881(HSBI)).

¹⁵⁰⁰ [[HSBI]] (Exhibit EU-889(HSBI)).

¹⁵⁰¹ See *US – Large Civil Aircraft*, para. 7.1786 note 3725.

¹⁵⁰² See EU FWS, paras. 1808, 1815.

¹⁵⁰³ EU FWS, para. 900.

¹⁵⁰⁴ [[HSBI]] (Exhibit EU-894(HSBI)).

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AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 306

3. Significant Lost Sales

1010. The EU alleges that subsidies to the 737 MAX caused the A320ceo to experience significant lost sales at the following customers in the following sales campaigns: American Airlines (2011); Southwest Airlines (2011); United Airlines (2012); SilkAir (2012); GOL (2012); Norwegian Air Shuttle (2012); Lion Air (2012); Avolon (2012); Air Lease Corp (2012); GECAS (2012); Aviation Capital Group (2012); Aeromexico (2012); and Icelandair (2013).¹⁵⁰⁵ Of these 13 campaigns, the following five also involved 737NG orders that the EU claims are lost sales in a separate product market: American Airlines (2011); Southwest Airlines (2011); United Airlines (2012); SilkAir (2012); and Lion Air (2012).¹⁵⁰⁶ The United States addresses these 737NG sales as well as all of the cited 737 MAX sales in this section, demonstrating the EU's failure to show that subsidies to Boeing single-aisle LCA cause present serious prejudice in the form of significant lost sales. Before discussing the details of each campaign, the United States notes four general errors, each of which is sufficient when applicable to cause the EU's claims fail.

1011. First, the EU's claims fail from the start because, as demonstrated in Section IV.I.1 above, it has failed generally to establish that the alleged subsidies are a genuine and substantial cause of the availability, technology, and pricing of the 737 MAX, and/or the pricing of the 737NG. The availability and technology of the 737 MAX would be unchanged absent alleged R&D subsidies, and the alleged subsidies that could conceivably have price effects are simply too small to genuinely and substantially cause Boeing to win the sales at issue.

1012. Second, in the campaigns involving both current and re-engined single aisle aircraft, the EU's claims fail to account for the fact that both groups of aircraft do, in fact, compete in the same product market.

1013. Third, most of these campaigns involved Boeing customer relationships that preclude a finding that the campaigns' results are genuinely and substantially related to the alleged subsidies. Of the 13 campaigns identified by the EU, nine involved airlines, with eight of these being either-all Boeing customers and existing 737 operators,¹⁵⁰⁷ or in the case of United, a 737 operator led by management with particularly close ties to Boeing. The EU acknowledges that Boeing's customer relationships¹⁵⁰⁸ and existing fleet incumbency [[HSBI]] benefits¹⁵⁰⁹ can, and do, play important roles in determining the outcome of a sales campaign, but it does nothing more than presume (rather than demonstrate) that the price and/or technology effects of the alleged subsidies must have been a genuine and substantial cause of Boeing taking these orders.

¹⁵⁰⁵ EU FWS, para. 1630.

¹⁵⁰⁶ EU FWS, para. 1845.

¹⁵⁰⁷ American Airlines, Southwest Airlines, GOL, Norwegian Air Shuttle, Lion Air, Aeromexico, and Icelandair.

¹⁵⁰⁸ See, e.g., EU FWS, para. 1859.

¹⁵⁰⁹ EU FWS, paras. 1678, 1682.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 307

To the contrary, the Boeing customer relationships at issue here preclude findings of lost sales just as similar relationships did in the original proceeding.¹⁵¹⁰

1014. Fourth, the EU, in the context of its displacement and impedance claims, assigns legal significance to its presumption that each manufacturer should be expected to have “roughly 50 percent market share” in “a large volume market in a duopoly.”¹⁵¹¹ Under this theory, and under the EU’s erroneous assertion that the A320neo and 737 MAX are in a product market separate from other single-aisle aircraft, the EU may not claim significant lost sales because the A320neo “retains a 60 percent market share lead,” a fact Airbus’s John Leahy recently celebrated.¹⁵¹² Thus, under the EU’s reasoning, the A320neo is outperforming sales expectations, and its sales should not be expected to be higher in a counterfactual situation absent the alleged subsidies. While this is the rationale of the EU, not the United States, the EU’s claims must be assessed according to the case it has made. This point also underscores the fact that the EU has little to complain about with respect to competition between the A320neo and 737 MAX. Indeed, from the campaigns at issue here, the EU’s chief complaint seems to be that Airbus has not been completely successful in taking Boeing’s long-time single-aisle customers.

a. American Airlines

1015. This campaign resulted in Airbus taking business from an important all-Boeing customer, [[HSBI]]. The only question is why the EU would cite this campaign as a lost sale for Airbus.

1016. As the EU recognizes, American Airlines was “an exclusive Boeing customer” before this campaign.¹⁵¹³ Given Airbus’s head start with the A320neo, it was [[HSBI]]¹⁵¹⁴ [[HSBI]].¹⁵¹⁵ Thus, while the EU contends that Boeing offered [[HSBI]]¹⁵¹⁶ [[HSBI]].

1017. This was the campaign that precipitated Boeing’s decision to proceed with the 737 MAX by offering it to American in July 2011. Notably, [[HSBI]]¹⁵¹⁷ [[HSBI]].

1018. Thus, no sales were “lost” by Airbus, and certainly not because of any subsidies. In addition, Boeing’s long-standing relationship with one of its most important all-Boeing customers (which already operated 737s), genuinely and substantially accounts for Boeing’s

¹⁵¹⁰ See *US – Large Civil Aircraft (Panel)*, para. 7.1786 note 3725.

¹⁵¹¹ See, e.g., EU FWS, para. 1593.

¹⁵¹² *Airbus Books Almost US\$70 Billion at Paris Air Show 2013*, Press Release, Airbus (June 20, 2013) (Exhibit USA-282).

¹⁵¹³ EU FWS, para. 1638.

¹⁵¹⁴ EU FWS, para. 1636, 1639.

¹⁵¹⁵ EU FWS, para. 1643; [[HSBI]] (Exhibit EU-881(HSBI)).

¹⁵¹⁶ EU FWS, paras. 1644-1645.

¹⁵¹⁷ EU FWS, para. 1636; [[HSBI]] (Exhibit EU-881(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 308

ability to sell the 737 MAX and 737NG to American. These points are confirmed by the EU's own evidence, in which Airbus stated that: **[[HSBI]]**¹⁵¹⁸ Indeed, Airbus's **[[HSBI]]**:

[[HSBI]]¹⁵¹⁹

1019. Given the evidence, the Panel should reject this lost sales claim.

b. Southwest Airlines

1020. This is another campaign involving an important all-Boeing customer that was not affected by the alleged subsidies to the 737 MAX and NG. The EU itself **[[HSBI]]**¹⁵²⁰ **[[HSBI]]**¹⁵²¹ That Southwest chose to stick with Boeing could hardly be attributed to the alleged subsidies. Accordingly, the Panel should reject this lost sales claim.

c. United Airlines

1021. This is yet another campaign where the EU fails to show that alleged subsidies, and not Boeing's relationship with an important Boeing customer and other non-subsidy factors,¹⁵²² genuinely and substantially account for the outcome. **[[HSBI]]**¹⁵²³ It was Boeing's relationship with Continental that led the original panel to reject the EU's 787 claim concerning Continental in the underlying proceeding,¹⁵²⁴ and it was Continental executives who took charge at United following the merger of United and Continental.¹⁵²⁵ There is no reason why this claim should not be rejected on the same basis, particularly since the EU is unable to support its assertions¹⁵²⁶ that alleged subsidies enabled Boeing to offer the 737 MAX and price the 737 MAX and 737NG as it did. Accordingly, the Panel should reject this lost sales claim.

d. SilkAir

1022. This is the lone airline sales campaign raised by the EU in which Boeing was not trying to avoid losing an existing 737 customer to Airbus,¹⁵²⁷ which is indicative of the lengths the EU

¹⁵¹⁸ **[[HSBI]]** (Exhibit EU-885(HSBI)).

¹⁵¹⁹ **[[HSBI]]** (Exhibit EU-885(HSBI)).

¹⁵²⁰ EU FWS, paras. 1654; **[[HSBI]]** (Exhibit EU-897(HSBI)).

¹⁵²¹ **[[HSBI]]** (Exhibit EU-900(HSBI)).

¹⁵²² See EU FWS, para. 1671.

¹⁵²³ EU FWS, para. 1673.

¹⁵²⁴ See *US – Large Civil Aircraft (Panel)*, para. 7.1786 note 3725.

¹⁵²⁵ *United-Continental Merger: Suspicious Confirmed as Exec Team Leans Toward Continental*, Brett Snyder, Moneywatch (July 30, 2010) (Exhibit USA-281).

¹⁵²⁶ See EU FWS, para. 1669.

¹⁵²⁷ **[[HSBI]]**.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 309

must reach in its attempts to show that Airbus’s single-aisle sales are somehow disadvantaged by the alleged subsidies. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs and 737NGs to SilkAir as it did was enabled by the alleged subsidies, but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Accordingly, the Panel should reject this lost sales claim.

e. GOL

1023. As at so many other accounts, Airbus in the GOL campaign was seeking to achieve [[HSBI]]¹⁵²⁸ The EU unwittingly highlights the importance of Boeing’s existing relationship with GOL as a non-attribution factor when it states that Boeing [[HSBI]]. The EU then concedes explicitly that [[HSBI]]¹⁵²⁹ [[HSBI]]¹⁵³⁰ [[HSBI]]¹⁵³¹

1024. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs to GOL as it did was enabled by the alleged subsidies, but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Accordingly, the Panel should reject this lost sales claim.

f. Norwegian Air Shuttle

1025. The EU’s allegations regarding the campaign at Norwegian Air Shuttle, an existing all-Boeing customer and 737NG operator, are misleading at best, and certainly no basis for a lost sales finding.

1026. While the EU portrays the airline’s order for 100 737 MAXs and 22 737NGs as having taken sales from Airbus “securing a larger order for this aircraft from this previous all-Boeing customer,”¹⁵³² the evidence shows that [[HSBI]]¹⁵³³ The airline did, in fact, order 100 A320neos from Airbus.¹⁵³⁴ Thus, Airbus did not “lose” anything in this campaign.

1027. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs and 737NGs to Norwegian as it did was enabled by the alleged subsidies, but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Accordingly, the Panel should reject this lost sales claim.

¹⁵²⁸ EU FWS, para. 1693.

¹⁵²⁹ EU FWS, para. 1704.

¹⁵³⁰ EU FWS, para. 1704.

¹⁵³¹ [[HSBI]] (Exhibit USA-280(HSBI)).

¹⁵³² EU FWS, paras. 1706, 1709.

¹⁵³³ [[HSBI]] (Exhibit USA-279(HSBI)).

¹⁵³⁴ EU FWS, para. 1709.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 310

g. Lion Air

1028. The EU complains that Lion Air, “Boeing’s largest customer in Asia,”¹⁵³⁵ ordered 201 737 MAXs and 29 737-900ERs to add to its existing 737 fleet, while in parallel ordering 174 A320neo and 60 A320ceo aircraft from Airbus in a deal worth \$24 billion at list prices according to EADS.¹⁵³⁶

1029. In fact, Airbus did not lose any sales to Boeing since, as a Boeing spokesperson observed at the time of the Airbus deal, “Lion Air has ambitious growth plans and no one airplane manufacturer can meet its needs.”¹⁵³⁷ Considering Lion Air’s [[HSBI]] it is fanciful for the EU to suppose that Airbus could have offered 464 A320neos and A320ceos [[HSBI]].¹⁵³⁸

1030. Moreover, Boeing’s relationship with such an important customer, including the large 737 fleet already in service, genuinely and substantially accounts for Lion Air’s decision to order additional Boeing single-aisle aircraft.

1031. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs and 737NGs to Lion Air as it did was enabled by the alleged subsidies, but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Accordingly, the Panel should reject this lost sales claim.

h. Avolon

1032. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs and 737NGs to Avolon as it did was enabled by the alleged subsidies,¹⁵³⁹ but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Further, the EU has not demonstrated that Airbus lost sales at this account, since Avolon also ordered A320neo aircraft,¹⁵⁴⁰ its order for 737 MAXs allowed the leasing company to acquire “an overall balanced portfolio,” as the EU puts it,¹⁵⁴¹ and the EU does not argue that Airbus actually offered to sell A320ceos and/or more A320neos than the 20 actually ordered. If anything, Boeing’s offer [[HSBI]]¹⁵⁴² Accordingly, the Panel should reject this lost sales claim.

¹⁵³⁵ EU FWS, para. 1726.

¹⁵³⁶ See EU FWS, para. 1722; *Airbus Snares Asia Deal*, Daniel Michaels and Gabriele Parussini, Wall Street Journal (Mar. 18, 2013) (Exhibit USA-278).

¹⁵³⁷ *Airbus Snares Asia Deal*, Daniel Michaels and Gabriele Parussini, Wall Street Journal (Mar. 18, 2013) (Exhibit USA-278).

¹⁵³⁸ Cf. EU FWS, para. 1740 ([[HSBI]]).

¹⁵³⁹ EU FWS, paras. 1734-1746.

¹⁵⁴⁰ EU FWS, para. 1734.

¹⁵⁴¹ EU FWS, para. 1736.

¹⁵⁴² EU FWS, para. 1738.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 311

i. Air Lease Corp

1033. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs to Air Lease Corp as it did was enabled by the alleged subsidies,¹⁵⁴³ but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Further, the EU has not demonstrated that Airbus lost sales at this account, since Air Lease Corp also ordered A320neo aircraft,¹⁵⁴⁴ and the EU does not argue that Airbus actually offered to sell more A320neos than the 50 actually ordered. Accordingly, the Panel should reject this lost sales claim.

j. GECAS

1034. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs and 737NGs to GECAS as it did was enabled by the alleged subsidies,¹⁵⁴⁵ but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Further, the EU has not demonstrated that Airbus lost sales at this account, since GECAS also ordered A320neo aircraft,¹⁵⁴⁶ and the EU does not argue that Airbus actually offered to sell A320neos and/or more A320neos than the 60 actually ordered. Accordingly, the Panel should reject this lost sales claim.

k. Aviation Capital Group

1035. The EU alleges that Boeing’s ability to offer, price, and sell 737 MAXs to Aviation Capital Group as it did was enabled by the alleged subsidies,¹⁵⁴⁷ but as demonstrated in Section IV.I.1, the alleged subsidies had no such effects. Further, the EU has not demonstrated that Airbus lost sales at this account, since Aviation Capital Group also ordered A320neo aircraft,¹⁵⁴⁸ and the EU does not argue that Airbus actually offered to sell more A320neos than the 30 actually ordered. Accordingly, the Panel should reject this lost sales claim.

l. Icelandair

1036. Icelandair is another all-Boeing customer,¹⁵⁴⁹ and its decision to order additional Boeing aircraft, this time the 737 MAX, cannot properly be attributed to the alleged subsidies. The EU admits that **[[HSBI]]** and it has no support for its assertion that the alleged subsidies were nevertheless a genuine and substantial cause of the campaign’s outcome.¹⁵⁵⁰ As demonstrated in

¹⁵⁴³ EU FWS, paras. 1747-1759.

¹⁵⁴⁴ EU FWS, para. 1750.

¹⁵⁴⁵ EU FWS, paras. 1760-1772.

¹⁵⁴⁶ EU FWS, para. 1760.

¹⁵⁴⁷ EU FWS, paras. 1773-1784.

¹⁵⁴⁸ EU FWS, para. 1750.

¹⁵⁴⁹ See EU FWS, para. 1794.

¹⁵⁵⁰ See EU FWS, para. 1794.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 312

Section IV.I.1, the alleged subsidies had no effects on Boeing’s ability to offer, price, and sell 737 MAXs to Icelandair as it did.

1037. Further, the alleged margin of victory in this campaign, [[HSBI]], is sufficiently wide that any alleged subsidy amount that the Panel could conceivably find would not have made a difference. Accordingly, the Panel should reject this lost sales claim.

*m. Aeromexico*¹⁵⁵¹

1038. Aeromexico is yet another all-Boeing customer,¹⁵⁵² and its decision to order additional Boeing aircraft, this time the 737 MAX, cannot properly be attributed to the alleged subsidies. The EU admits that [[HSBI]], and Airbus itself [[HSBI]]¹⁵⁵³ In light of this evidence, and the EU’s general failures to show that the alleged subsidies enabled the availability, technology, or pricing of the 737 MAX, the EU has failed to demonstrate that the alleged subsidies were a genuine and substantial cause of this sale going to Boeing.

4. Threat of Impedance

1039. The United States recalls the Appellate Body’s guidance with respect to the legal and evidentiary standards regarding impedance and threat of impedance:

{I}mpedance refers to a situation where the exports or imports of the like product of the complaining Member would have expanded more had they not been ‘obstructed’ or ‘hindered’ by the subsidized product, or where exports or imports of the like product did not materialize at all because production was ‘held back’ by the subsidized product. We observe that Article 6.4 of the *SCM Agreement*, which applies to both phenomena referred to in Article 6.3(a) and (b), requires that, as with displacement, a finding of impedance should be supported by evidence of changes in the relative market share in favour of the subsidized product, over a sufficiently representative period, to demonstrate “clear trends” in the development of the market concerned. Since, unlike with displacement, however, impedance may not be a visible phenomenon, evidence of trends may not be dispositive, or may hold less probative value, for a finding of impedance.¹⁵⁵⁴

1040. The EU alleges that imports of the A320neo are threatened with impedance in the U.S. market and six third-country markets as a result of subsidies causing the A320neo to lose sales to

¹⁵⁵¹ The United States addresses the EU’s 787 lost sales claim concerning Aeromexico above in Section IV.H.c.x.

¹⁵⁵² See EU FWS, para. 1544.

¹⁵⁵³ EU FWS, para. 1542.

¹⁵⁵⁴ *US – Large Civil Aircraft (AB)*, para. 1086 (internal citations omitted).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 313

the 737 MAX.¹⁵⁵⁵ The EU has failed to demonstrate threat of impedance in any of these markets. This is the result of several errors the EU repeats across the various country markets. We will discuss those errors here before turning to each claim.

1041. **Lack of Evidence.** The United States recalls the Appellate Body’s guidance that impedance claims should be supported by evidence of changes in the relative market share, over a sufficiently representative period, to demonstrate clear trends.¹⁵⁵⁶ The EU has not produced a single piece of evidence summarizing market share over a representative period of time for any of the markets with respect to which it asserts threat of impedance claims. The EU’s failure to produce any evidence to this effect means that it has failed to make a *prima facie* case of threat of impedance in its “new technology single-aisle market.”

1042. **Reliance on Lost Sales.** The EU bases all of its claims on future deliveries of alleged lost sales, often just a single one. The Appellate Body has already made clear that this is insufficient. In the original proceeding, the panel found lost sales caused by subsidies to the 787 in four campaigns – Qantas (2005), Ethiopian Airlines (2005), Icelandair (2005), and Kenya Airways (2006).¹⁵⁵⁷ The original panel also found threat of impedance in the Australian, Ethiopian, Icelandic, and Kenyan markets “based on delivery data for the four countries where the sales campaigns on which its lost sales finding was based took place.”¹⁵⁵⁸ The Appellate Body upheld the lost sales finding for those four campaigns.¹⁵⁵⁹ However, it found that the evidence did not support the original panel’s finding of threat of displacement and impedance with respect to the Ethiopian, Icelandic, and Kenyan markets because of a failure to “identify clear trends demonstrating such a threat.”¹⁵⁶⁰ Thus, the Appellate Body has unambiguously indicated that mere recitation of lost sales in a market is insufficient to prove displacement, impedance, or threat thereof.

1043. **Market Share Assumptions Not Based on Evidence.** As the EU explains, it “uses, as a benchmark for assessing impedance and threat thereof in large volume markets whether Boeing’s market share significantly exceeds 50 percent.”¹⁵⁶¹ The EU relies on this benchmark in making its threat of impedance claim in the Chinese market. Such claims unquestionably fail because the SCM Agreement does not permit a panel to make a blanket assumption that market shares should be 50 percent for each of two duopolists when analyzing displacement or impedance. In addition, the EU has not shown that, absent subsidies, the market shares would be 50 percent in

¹⁵⁵⁵ See EU FWS, para. 1828. The six third-country markets are: Brazil, Iceland, Indonesia, Mexico, Norway, and Singapore.

¹⁵⁵⁶ *US – Large Civil Aircraft (AB)*, para. 1086 (internal citations omitted).

¹⁵⁵⁷ See *US – Large Civil Aircraft (AB)*, para. 1068.

¹⁵⁵⁸ *US – Large Civil Aircraft (AB)*, para. 1072.

¹⁵⁵⁹ See *US – Large Civil Aircraft (AB)*, para. 1068.

¹⁵⁶⁰ *US – Large Civil Aircraft (AB)*, para. 1126. The threat of impedance in the Australia market was not appealed.

¹⁵⁶¹ EU FWS, para. 1582.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 314

any individual country market, much less all large markets. A *prima facie* case would require a demonstration, with actual evidence, that Airbus’s products were impeded in each of the relevant markets, and that such impedance was genuinely and substantially caused by the subsidies at issue. The EU has failed to do this.

a. The EU Has Failed to Demonstrate Threat of Impedance under Article 6.3(a) of the SCM Agreement.

1044. The EU has provided no evidence of clear trends in the development of the U.S. “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance,¹⁵⁶² it has simply referenced alleged lost sales – American Airlines (2011 sale), Southwest Airlines (2011 sale), and United Airlines (2012 sale).¹⁵⁶³ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(a) of the SCM Agreement.¹⁵⁶⁴ Therefore, the EU’s claim cannot even arguably be sustained.

1045. Moreover, as explained in Sections IV.H.3.a-c, the EU has failed to demonstrate that the 2011 American Airlines, 2011 Southwest Airlines, and 2012 United Airlines sales constitute lost sales under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of those alleged lost sales, it necessarily fails.

b. The EU Has Failed to Demonstrate Threat of Impedance in Third-Country Markets.

i. Brazil

1046. The EU has provided no evidence of clear trends in the development of the Brazilian “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance.¹⁵⁶⁵ Instead, it relies on its unsupported premise that Boeing and Airbus would each have a 50 percent market share in the absence of the subsidies at issue, and then alleges that Boeing will make 60 of 82, or 73 percent, of current and future deliveries in this market.¹⁵⁶⁶ The EU also relies on the GOL 2012 alleged lost sale claim.¹⁵⁶⁷ Neither argument is sufficient to even make out a *prima facie* case.

1047. As explained above, the SCM Agreement does not permit a blanket assumption that market shares should be 50 percent for each of two duopolists. And the EU has cited no actual

¹⁵⁶² See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁶³ EU FWS, para. 1829.

¹⁵⁶⁴ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁵⁶⁵ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁶⁶ EU FWS, para. 1831.

¹⁵⁶⁷ EU FWS, para. 1832.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 315

data to show that Boeing’s market share in the Brazilian new technology single-aisle market would be 50 percent in the absence of the subsidies to the 737 MAX at issue.¹⁵⁶⁸

1048. Moreover, as explained in Section IV.I.3.e, the EU has failed to demonstrate that the 2012 GOL sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

1049. The EU was required to demonstrate, with actual evidence, that subsidies to the 737 MAX genuinely and substantially cause the threat of impedance in this market. It has failed to do so.

ii. Iceland

1050. The EU has provided no evidence of clear trends in the development of the Icelandic “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance;¹⁵⁶⁹ it has simply referenced a single alleged lost sale – Icelandair (2013 sale).¹⁵⁷⁰ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁵⁷¹ Therefore, the EU’s claim cannot even arguably be sustained.

1051. Moreover, as explained in Section IV.I.3.1, the EU has failed to demonstrate that the 2013 Icelandair sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

iii. Indonesia

1052. The EU has provided no evidence of clear trends in the development of the Indonesia “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance;¹⁵⁷² it has simply referenced a single alleged lost sale – Lion Air (2012 sale).¹⁵⁷³ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁵⁷⁴ Therefore, the EU’s claim cannot even arguably be sustained.

¹⁵⁶⁸ See EU FWS, paras. 1831-1833.

¹⁵⁶⁹ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁷⁰ EU FWS, para. 1834.

¹⁵⁷¹ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁵⁷² See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁷³ EU FWS, para. 1835.

¹⁵⁷⁴ See *US – Large Civil Aircraft (AB)*, para. 1241.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 316

1053. Moreover, as explained in Section IV.I.3.g, the EU has failed to demonstrate that the 2012 Lion Air sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

iv. Mexico

1054. The EU has provided no evidence of clear trends in the development of the Mexican “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance;¹⁵⁷⁵ it has simply referenced a single alleged lost sale – Aeromexico (2012 sale).¹⁵⁷⁶ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁵⁷⁷ Therefore, the EU’s claim cannot even arguably be sustained.

1055. Moreover, as explained in Section IV.I.3.m, the EU has failed to demonstrate that the 2012 Aeromexico sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

v. Norway

1056. The EU has provided no evidence of clear trends in the development of the Norwegian “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance;¹⁵⁷⁸ it has simply referenced a single alleged lost sale – Norwegian Air Shuttle (2012 sale).¹⁵⁷⁹ As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁵⁸⁰ Therefore, the EU’s claim cannot even arguably be sustained.

1057. Moreover, as explained in Section IV.I.3.f, the EU has failed to demonstrate that the 2012 Norwegian Air Shuttle sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

¹⁵⁷⁵ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁷⁶ EU FWS, para. 1836.

¹⁵⁷⁷ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁵⁷⁸ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁷⁹ EU FWS, para. 1837.

¹⁵⁸⁰ See *US – Large Civil Aircraft (AB)*, para. 1241.

vi. Singapore

1058. The EU has provided no evidence of clear trends in the development of the Singaporean “new technology single-aisle market” over a representative period that could arguably demonstrate threat of impedance;¹⁵⁸¹ it has simply referenced a single alleged lost sale – Silkair (2012 sale).¹⁵⁸² As explained above, the Appellate Body has made clear that this is insufficient to show threat of impedance under Article 6.3(b) of the SCM Agreement.¹⁵⁸³ Therefore, the EU’s claim cannot even arguably be sustained.

1059. Moreover, as explained in Section IV.I.3.d, the EU has failed to demonstrate that the 2012 SilkAir sale constitutes a lost sale under Article 6.3(c) of the SCM Agreement. Therefore, because the EU’s threat of impedance claim is a consequence of that alleged lost sale, it necessarily fails.

J. The EU Has Failed to Demonstrate that Alleged Subsidies to the 737NG Cause Adverse Effects Through Significant Price Suppression, Significant Lost Sales, Displacement, Impedance, or Threat Thereof With Respect to the A320ceo.

1060. With respect to the single-aisle “existing technology” “market” (*i.e.*, 737NG and A320ceo), the EU asserts that U.S. subsidies have caused significant price suppression, significant lost sales, and impedance or threat thereof in the United States as well as displacement, impedance or threat thereof in third country markets. At the most fundamental level, the EU’s claims fail because the subsidies that have even any theoretical bearing on pricing are far too small to cause any adverse effects. (Recall that FSC/ETI, which anchored the panel’s original findings on price effects causation in the single-aisle market, was last enjoyed by Boeing in 2006). The United States details this and many other failings in the EU’s adverse effects case in this claimed market below.

1. Alleged Price Effects Causal Mechanism

1061. As with the 787 and the 737 MAX, the EU fails to undertake any detailed showing of a price-based causal mechanism through which subsidies to the 737NG have a genuine and substantial causal relationship with market phenomena laid out in Article 6.3.¹⁵⁸⁴ Instead, the EU again refers back to its price causal mechanism section, which discussed the three separate aggregated groups of subsidies, but provided no analysis of any of those groups that was specific to the 737NG or the A320ceo.¹⁵⁸⁵ This is insufficient to make out a *prima facie* case that the

¹⁵⁸¹ See *US – Large Civil Aircraft (AB)*, para. 1086.

¹⁵⁸² EU FWS, para. 1838.

¹⁵⁸³ See *US – Large Civil Aircraft (AB)*, para. 1241.

¹⁵⁸⁴ See EU FWS, paras. 1842-1844.

¹⁵⁸⁵ See EU FWS, paras. 1112-1192, 1842.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 318

subsidies alleged to benefit the 737 MAX are causing adverse effects through a price causal mechanism.

1062. In any event, a more thorough analysis of the three aggregated groups of subsidies specific to the EU’s “existing technology single-aisle” market demonstrates that there is no price-based causal link between the subsidies and the adverse effects alleged by the EU.

1063. **R&D subsidies.** As explained in Section IV.C, the EU cannot re-litigate the unappealed finding that price effects cannot be attributed to the R&D subsidies acting through a technology effects causal mechanism.

1064. **Tied tax subsidies.** The EU has failed to demonstrate that the tied tax subsidies to the 737NG have a genuine and substantial causal relationship with the alleged adverse effects, particularly when viewed in the context of the particular subsidies, products, and market at issue here.¹⁵⁸⁶ The EU’s generalized assessment of the price effects attributable to tied tax subsidies is based on an aggregated group that includes FSC/ETI, the Washington State and City of Everett B&O tax rate reductions, and the South Carolina apportionment agreement.¹⁵⁸⁷

1065. As an initial matter, the EU does not even allege that the Everett B&O tax rate reduction or the South Carolina apportionment agreement causes adverse effects in the EU’s 737NG/A320ceo market.¹⁵⁸⁸ Thus, the EU’s effort at an aggregated analysis of all four subsidies is simply irrelevant to the EU’s “new technology single-aisle market,” where at least two of the four are inapplicable. In addition, as explained in Section III.H, the FSC/ETI scheme has been withdrawn, and Boeing has not received FSC/ETI benefits since at least 2006. This leaves, at most, the Washington B&O tax rate reduction.

1066. And the magnitude of the Washington B&O tax rate reduction is simply too small to be a substantial cause of adverse effects. As the data provided by the State of Washington show, Boeing’s average annual amount saved from the Washington B&O tax rate reduction from 2007-2012 was \$[BCI].¹⁵⁸⁹ And some of this must be allocated to 787 sales and 737 MAX sales, which are also alleged to benefit from the Washington B&O tax reduction subsidies.

1067. The EU’s lost sales claims in this compliance proceeding alone incorporate at least 410 737NG sales between 2007 and 2012, in addition to at least 347 787 sales and 1,057 737 MAX sales.¹⁵⁹⁰ Thus, a conservative approach would have Boeing allocating the Washington B&O tax rate reduction over 1,830 aircraft, or 305 per year. That works out to about \$[BCI] per aircraft,

¹⁵⁸⁶ See *US – Large Civil Aircraft (AB)*, para. 1193.

¹⁵⁸⁷ EU FWS, para. 1132.

¹⁵⁸⁸ See EU FWS, para. 1135.

¹⁵⁸⁹ Washington State Tax Information (Exhibit USA-264(BCI)).

¹⁵⁹⁰ See *Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations*, Exhibit USA-295(HSBI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 319

or just [[HSBI]] percent of the \$[[HSBI]] average net 737NG purchase price using data from the campaigns identified by the EU for the Panel’s Article 13 request.¹⁵⁹¹ Of course, Boeing could allocate more to some campaigns – perhaps the more expensive 787s – but that leaves even less to be allocated to 737NG sales. This is not meant to be a precise calculation, but it leaves no doubt. The magnitude of the subsidies at issue are not in the vicinity of what would be necessary to *substantially* cause adverse effects through the lowering of 737NG prices. Accordingly, the EU’s suggestion that the tied tax subsidies cause adverse effects in its “existing technology single-aisle market” fails.

1068. **Miscellaneous Subsidies.** Finally, the EU has failed to demonstrate that the miscellaneous subsidies to the 737NG have a genuine and substantial causal relationship with market phenomena under Article 6.3. The EU’s generalized assessment of the price effects attributable to the miscellaneous subsidies (*i.e.*, those that are not R&D subsidies and are not tied tax measures) is based on an aggregated group that includes: (i) City of Wichita IRBs; (ii) Washington untied tax breaks and incentives (*i.e.*, Washington B&O tax credits for preproduction development and property taxes, Washington sales and use tax exemptions for computer hardware, software, and peripherals and Washington B&O tax credits for leasehold excise taxes on property and buildings leased from the Washington government and used to manufacture airplanes); (iii) Washington funding and facilities support through the JCATI; and (iv) South Carolina packages of tax, infrastructure, training, and other subsidies through Projects Gemini and Emerald.¹⁵⁹²

1069. But the only miscellaneous subsidy the EU alleges to be linked to the 737NG is the Wichita IRBs.¹⁵⁹³ Thus, the EU’s analysis based on all miscellaneous subsidies being aggregated has no relevance. Moreover, in the original proceedings, the Wichita IRBs were only found to cause adverse effects to the extent their effects supplemented and complemented the effects of the tied tax subsidies, which had been found on an aggregated basis to be a genuine and substantial cause of adverse effects in the form of lost sales in the 100-200 seat market. This is equally true in this compliance proceeding. The EU effectively acknowledges that, even if all of the miscellaneous subsidies were aggregated, they can only be found to cause adverse effects if their effects are cumulated with other subsidies’ effects.¹⁵⁹⁴ As discussed above, with FSC/ETI withdrawn, the tied tax subsidies are no longer a substantial cause of any adverse effects. Therefore, there is no anchor group of subsidies for the Wichita IRBs to complement and supplement. Accordingly, none of the miscellaneous subsidies can be found to cause adverse effects in the EU’s 737NG/A320ceo market.

¹⁵⁹¹ See Compilation of Number of Boeing Aircraft Sold in Alleged Lost Sales Campaigns and Related Calculations, Exhibit USA-295(HSBI)).

¹⁵⁹² EU FWS, para. 1155.

¹⁵⁹³ EU FWS, paras. 1164-1167.

¹⁵⁹⁴ See EU FWS, paras. 1174-1175.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 320

2. Significant Price Suppression

1070. The EU alleges that alleged subsidies to the 737NG presently cause significant price suppression with respect to the A320neo through a price effect causal mechanism.¹⁵⁹⁵ The EU’s arguments fail for several reasons.

a. Causation

1071. The EU’s claim of significant price suppression after the compliance deadline is unsupported by the requisite causal link. As the United States demonstrates above, the EU cannot rely on the effects of alleged R&D programs in attempting to show adverse effects under its price effects causation theory. Further, the magnitude of the alleged subsidies that could properly be considered, when properly calculated and then measured under conservative assumptions, is – at [[**HSBI**]] – grossly insufficient to be a genuine and substantial cause of significant price suppression.

b. Pricing Data

1072. Before discussing the substantive aspects of the pricing data, the United States notes that the EU failed to comply with the Panel’s Article 13 request for order price information. Question 6 of the Panel’s request asked for “average pricing information for each of the Airbus A319 . . . A320 . . . A321 . . .”, yet the EU chose to provide A320ceo order pricing data on an aggregated family basis.¹⁵⁹⁶

1073. Nonetheless, the available pricing data fail to support, and even contradict, the EU’s price suppression claim. The EU complains of Airbus’s [**BCI**],¹⁵⁹⁷ but the data give no indication that 737NG prices are responsible for this. As shown in the chart below, average net prices for the A320ceo and 737NG have [**BCI**]:

737NG and A320ceo Indexed Net Order Prices¹⁵⁹⁸

[**BCI**]

1074. These data are not consistent with the EU’s theory of price suppression, let alone price suppression that is “significant.” Meanwhile, there are non-subsidy factors unaddressed by the EU that likely account for some, if not all, of the price phenomena.

¹⁵⁹⁵ See EU FWS, paras. 1871-1873.

¹⁵⁹⁶ See EU Responses to Article 13 Questions (Feb. 28, 2013), Question 6; see also EU FWS, para. 1286.

¹⁵⁹⁷ EU FWS, para. 1876.

¹⁵⁹⁸ Sources: Indexed Average Net Order Prices for Boeing LCA, Boeing (Exhibit USA-288(BCI)); Price and Price Per Seat Evolution of Net Order Intakes of A330, A320ceo, and A350 XWB family LCA, Airbus (Exhibit EU-690(BCI)).

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 321

c. Non-Subsidy Factors

1075. The EU does not account for non-subsidy factors concerning A320neo pricing, including the following.

1076. The first non-subsidy factor is competition from the A320neo and 737 MAX. Mr. Mourey of Airbus describes a demand-side substitution relationship – *i.e.*, competition – between these aircraft when he notes that customers will substitute the A320ceo and 737NG for the A320neo and 737 MAX to the extent the latter are unavailable.¹⁵⁹⁹ The A320neo and 737 MAX therefore constrain A320ceo prices, yet the EU, to the extent it could show that *any* product or products were suppressing A320ceo prices, provides no basis for its assertion that all suppression is attributable to the 737NG.

1077. The second non-subsidy factor is Airbus’s ability to produce the A320ceo at record levels. In early 2013, Airbus celebrated reaching a production rate of 42 A320s per month: “Rate 42 – the highest ever rate for any commercial aircraft.”¹⁶⁰⁰ While such an aggressive increase in production may well be profit-maximizing for Airbus (by increasing sales volume and lowering unit costs), it will tend to suppress prices as well, since the supply of A320ceo’s is greater than it would be without the rate increases.

1078. In light of the above demonstration, the Panel should reject the EU’s claim of significant price suppression regarding the 737 MAX.

3. Significant Lost Sales

1079. The EU alleges that subsidies to the 737NG caused the A320ceo to experience significant lost sales at the following customers in seven sales campaigns: Fly Dubai (2008); Delta Air Lines (2011); American Airlines (2011); Southwest Airlines (2011); United Airlines (2012); SilkAir (2012); and Lion Air (2012).¹⁶⁰¹ The Panel should reject these claims. There is no conceivable way that alleged subsidies to the 737NG could have genuinely and substantially caused these orders to go to Boeing, since the magnitude of any subsidies to the 737NG is so small, as demonstrated above in Section IV.J.1. Further, the campaign-specific evidence cited by the EU does not show Boeing’s behavior in these campaigns to be anything different from what would be expected of an unsubsidized producer.¹⁶⁰² Finally, the EU acknowledges that Boeing’s customer relationships may play a role in determining the outcome of a sales campaign,¹⁶⁰³ but it

¹⁵⁹⁹ Mourey Statement, paras. 91-92 (Exhibit EU-34(BCI)).

¹⁶⁰⁰ Airbus Results 2012, Outlook 2013, Presentation, Fabrice Bregier, Airbus (Jan. 17, 2013) (Exhibit USA-296).

¹⁶⁰¹ EU FWS, para. 1845.

¹⁶⁰² *Cf.*, *e.g.*, EU FWS, paras. 1847-1867.

¹⁶⁰³ *See* EU FWS, para. 1859.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 322

nevertheless presumes that alleged subsidy price effects must have been a genuine and substantial cause of Boeing taking these orders.

a. Delta Airlines

1080. The flaws in the EU’s arguments are apparent in the Delta Air Lines campaign. As the EU’s own evidence shows, it was **[[HSBI]]**.¹⁶⁰⁴ The EU also acknowledges that, **[[HSBI]]**¹⁶⁰⁵ and that “{c}ertain non-subsidy factors – such as Boeing’s relationship with the airline – may have also contributed to the 737 sales.”¹⁶⁰⁶ Nonetheless, the EU insists that the price effects of alleged subsidies are a genuine and substantial cause of Boeing’s win. This, however, is belied by the EU’s argument that **[[HSBI]]**¹⁶⁰⁷ **[[HSBI]]**¹⁶⁰⁸ **[[HSBI]]** any reasonable estimate of the magnitude of subsidies that might be considered in a price effects analysis. In sum, the EU has not shown that, *but for* alleged subsidies, Boeing either would not or could not have priced its 737NG aircraft at levels necessary to win the sale. Accordingly, the EU has failed to demonstrate that the Delta Air Lines campaign is a lost sale caused by alleged subsidies.

b. Fly Dubai

1081. **[[HSBI]]**.¹⁶⁰⁹ Most important, the **[[HSBI]]**.¹⁶¹⁰ Accordingly, the EU has failed to demonstrate that the Fly Dubai campaign is a lost sale caused by alleged subsidies.

1082. The United States discusses the other alleged lost sales involving the 737NG alongside the EU’s 737 MAX lost sales claims involving the same customer, in Section IV.I.3 above. In sum, the EU has failed to establish its claim of significant lost sales concerning the 737NG.

4. *The EU Has Failed to Demonstrate Impedance or Threat thereof under Article 6.3(a) of the SCM Agreement.*

1083. The EU contends that the effect of the alleged subsidies to the 737NG is to cause imports of A320ceo family LCA to experience impedance and threat thereof in the U.S. “existing technology single-aisle market” under Article 6.3(a) of the SCM Agreement.¹⁶¹¹ The EU claims fail.

¹⁶⁰⁴ See EU FWS, pra. 1851.

¹⁶⁰⁵ EU FWS, para. 1852.

¹⁶⁰⁶ EU FWS, para. 1859.

¹⁶⁰⁷ EU FWS, para. 1853.

¹⁶⁰⁸ EU FWS, para. 1856.

¹⁶⁰⁹ EU FWS, para. 1863.

¹⁶¹⁰ EU FWS, para. 1865.

¹⁶¹¹ EU FWS, para. 1903.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 323

1084. The EU claims depend on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no basis to find that Airbus’s share of deliveries in the U.S. market is being impeded or threatened with impedance.

1085. Further, as discussed in Section IV.H.6, there is no support for the EU’s presumption that Airbus should be expected to achieve a roughly 50 percent share in the U.S. market, or any other.

1086. Finally, the EU’s reliance on alleged lost sales¹⁶¹² does not support its threat of impedance claim because, as demonstrated in Section IV.J.3, it has failed to demonstrate that those sales constitute significant lost sales caused by the alleged subsidies. Accordingly, the EU’s claims should be rejected.

5. *The EU Has Failed to Demonstrate Displacement, Impedance, and/or Threat Thereof in Third-Country Markets.*

1087. As with its claim under Article 6.3(a), the EU has failed to establish its claims under Article 6.3(b) of displacement, impedance and/or threat thereof in third country markets with respect to the A320ceo.

a. Australia (alleged displacement and threat thereof)

1088. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience displacement and threat thereof in the Australia “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶¹³ The EU claims fail.

1089. The EU claims depend on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no basis to find that the A320ceo deliveries in this Australia market are being displaced or threatened with displacement.

1090. The EU’s threat claim also fails because there are inadequate data to show clear trends in anticipated deliveries, with only five anticipated deliveries in the entire market over the 2013-2014.¹⁶¹⁴ While the extent of data required will vary based on the products and markets

¹⁶¹² EU FWS, para. 1906.

¹⁶¹³ EU FWS, para. 1908.

¹⁶¹⁴ EU FWS, para. 1908.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 324

involved, these single-aisle aircraft are typically sold in higher volumes than any other types of LCA, such that 5 deliveries over two years is an insufficient basis from which to discern displacement. Accordingly, the EU's claims should be rejected.

b. Brazil (alleged threat of displacement)

1091. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience a threat of displacement in the Brazil “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶¹⁵ The EU claim fails.

1092. The EU claim depends on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1., the magnitude of any alleged subsidies that could conceivably be found to affect Boeing's pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no basis to find that A320ceo deliveries in this Brazil market are being threatened with displacement. Accordingly, the EU's claim should be rejected.

c. Canada (alleged impedance and threat thereof)

1093. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience a impedance and threat thereof in the Canada “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶¹⁶ The EU claims fail.

1094. The EU claims depend on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1., the magnitude of any alleged subsidies that could conceivably be found to affect Boeing's pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no basis to find that A320ceo deliveries in this Canada market are being impeded or threatened with impedance.

1095. Further, as discussed in Section IV.H.6, there is no support for the EU's presumption¹⁶¹⁷ that Airbus should be expected to achieve a roughly 50% share in this Canada market, or any other. Accordingly, the EU's claims should be rejected.

¹⁶¹⁵ EU FWS, para. 1911.

¹⁶¹⁶ EU FWS, para. 1913.

¹⁶¹⁷ EU FWS, para. 1913.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 325

d. Indonesia (alleged displacement, impedance, and threat of impedance)

1096. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience a displacement, impedance and threat of impedance in the Indonesia “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶¹⁸ The EU claims fail.

1097. The EU claims depend on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no basis to find that A320ceo deliveries in this Indonesia market are being displaced, impeded or threatened with impedance.

1098. Further, as discussed in Section IV.H.6, there is no support for the EU’s presumption¹⁶¹⁹ that Airbus should be expected to achieve a roughly 50% share in this Indonesia market, or any other.

1099. Finally, the EU’s claims, and the market data on which they rely, are largely concerned with Boeing’s sales and deliveries of 737s to Lion Air.¹⁶²⁰ As shown in Section IV.I.3.g, the 2012 Lion Air for Boeing 737s is neither a lost sale for Airbus nor an effect of the alleged subsidies. Moreover, in the underlying proceeding, the EU attempted to show that Lion Air’s first order for 737NGs was a significant lost sale, but it is not covered by the DSB’s recommendations and rulings, and the EU does not raise it again here. Accordingly, the EU’s claims should be rejected.

e. Malaysia (alleged displacement)

1100. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience displacement in the Malaysia “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶²¹ The EU claim fails.

1101. The EU claim depends on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[HSBI]], far too small to have such an effect. There is, therefore, no

¹⁶¹⁸ EU FWS, para. 1913.

¹⁶¹⁹ EU FWS, para. 1917.

¹⁶²⁰ See EU FWS, paras. 1915-1919.

¹⁶²¹ EU FWS, para. 1921-1922.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 326

basis to find that the A320ceo deliveries in this Malaysia market are being displaced. Accordingly, the EU’s claim should be rejected.

f. Norway (alleged impedance and threat thereof)

1102. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience impedance and threat of impedance in the Norway “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶²² The EU claims fail.

1103. The EU claims depend on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[**HSBI**]], far too small to have such an effect. There is, therefore, no basis to find that A320ceo deliveries in this Norway market are being impeded or threatened with impedance. Accordingly, the EU’s claims should be rejected.

g. Russia (alleged threat of displacement)

1104. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience a threat of displacement in the Russia “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶²³ The EU claim fails.

1105. The EU claim depends on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[**HSBI**]], far too small to have such an effect. There is, therefore, no basis to find that the A320ceo deliveries in this Russia market are threatened with displacement. Accordingly, the EU’s claim should be rejected.

h. Singapore (alleged threat of impedance)

1106. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience a threat of impedance in the Singapore “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶²⁴ The EU claim fails.

¹⁶²² EU FWS, para. 1923-1924.

¹⁶²³ EU FWS, para. 1925-1926.

¹⁶²⁴ EU FWS, para. 1927-1928.

**U.S. AND EU BUSINESS CONFIDENTIAL INFORMATION (BCI)
AND HIGHLY SENSITIVE BUSINESS INFORMATION (HSBI) REDACTED**

*United States – Measures Affecting Trade in Large Civil Aircraft:
Recourse to Article 21.5 of the DSU by the United States (DS53)*

First Written Submission of the United States
June 27, 2013 – Page 327

1107. The EU claim depends on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[**HSBI**]], far too small to have such an effect.

1108. The EU claim also depends on its SilkAir lost sales allegation, which it has failed to establish,¹⁶²⁵ and which in any event would be inadequate by itself to show impedance. There is, therefore, no basis to find that the A320ceo deliveries in this Singapore market are threatened with impedance. Accordingly, the EU’s claim should be rejected.

i. UAE (alleged displacement and threat of impedance)

1109. The EU contends that the effect of the alleged subsidies to the 737NG is to cause exports of A320ceo family LCA to experience displacement and threat of impedance in the UAE “existing technology single-aisle market” under Article 6.3(b) of the SCM Agreement.¹⁶²⁶ The EU claim fails.

1110. The EU claim depends on the proposition that alleged subsidies cause Boeing to price the 737NG lower than it would otherwise, and to such an extent that the 737NG takes sales and market share from the A320ceo. However, as demonstrated in Section IV.J.1, the magnitude of any alleged subsidies that could conceivably be found to affect Boeing’s pricing in an aggregated assessment is, at less than [[**HSBI**]], far too small to have such an effect. There is, therefore, no basis to find that the A320ceo deliveries in this UAE market are being displaced or threatened with impedance. Accordingly, the EU’s claim should be rejected.

¹⁶²⁵ See *supra* Section IV.I.3.d.

¹⁶²⁶ EU FWS, para. 1927-1928.