

# ARTICLES

## The World Trade Organization, Renewable Energy Subsidies, and the Case of Feed-in Tariffs: Time for Reform toward Sustainable Development?\*

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## I. INTRODUCTION

Renewable energy subsidies are crucial for combating climate change, and yet the world’s international legal infrastructure is not designed to accommodate them. The world needs a renewable energy sector to develop and implement the technologies necessary to reduce carbon emissions,<sup>1</sup> and renewable subsidies are one of the best ways to cultivate this sector quickly.<sup>2</sup> However, one country’s unfair subsidies can harm another country’s industry. To take a recent newswor-

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1. The international commitments on climate change and global warming are enshrined in the text of the Kyoto Protocol (“the Protocol”), which was adopted in 1997. The Protocol sets explicit emission targets for certain signatory countries: each of these countries was to reduce its greenhouse gas (“GHG”) emissions, so that its total emissions did not exceed a specified percentage of its base period emissions. Developing and least developed countries did not make specific commitments, but could benefit from certain flexible mechanisms provided for in the Protocol and thus contribute to the global emission reduction goal. *See generally* INTERNATIONAL LAW AND GLOBAL CLIMATE CHANGE (Robin Churchill & David Freestone eds., 1991); FRIEDRICH SOLTAU, FAIRNESS IN INTERNATIONAL CLIMATE CHANGE LAW AND POLICY (2011); RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITIES (2005); WORLD CLIMATE CHANGE: THE ROLE OF INTERNATIONAL LAW AND INSTITUTIONS (Ved P. Nanda ed., 1983).

2. According to the Intergovernmental Panel on Climate Change (“IPCC”), “one of the most effective incentives for fostering GHG reductions are the price supports associated with the production of renewable energy, which tend to be set at attractive levels. These price supports have resulted in the significant expansion of the renewable energy sector in OECD countries due to the requirement that electric power producers purchase such electricity at favourable prices.” INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE 762 (2007). The IPCC was established in 1988 by the World Meteorological Organization (“WMO”) and the United Nations Environment Programme (“UNEP”). *Organization*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, <http://www.ipcc.ch/organization/organization.shtml> (last visited Oct. 10, 2015). The main task of this scientific body is to provide the leading powers with a clear scientific view on the current state of climate change and its potential environmental and socioeconomic consequences. *Id.* The IPCC has released five Assessment Reports since 1990: the first in 1990; and then in 1995; 2001; 2007; and 2014. *History*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, [http://www.ipcc.ch/organization/organization\\_history.shtml](http://www.ipcc.ch/organization/organization_history.shtml) (last visited Oct. 10, 2015). The fifth assessment report consists of

thy example, China's subsidies for its solar exports have allegedly bankrupted solar companies in the United States and the European Union ("EU"), undermining their renewable energy sectors as they take root.<sup>3</sup> Thus, renewable subsidies pit two legitimate policy concerns against each other: cultivation of renewable energy and prevention of unfair trade practices.

The World Trade Organization ("WTO") regulates most subsidies effectively, but was not designed with renewable subsidies in mind. The Agreement on Subsidies and Countervailing Measures ("SCM")—the heart of the WTO subsidies regime—treats renewable subsidies the same as all other subsidies, without taking into account non-trade, environmental concerns.<sup>4</sup> This environmental blind spot is unusual for the WTO.<sup>5</sup> However, the SCM does not include an environmental exception,<sup>6</sup> leaving the agreement ill-suited to balance trade and environmental concerns.

This article proposes several legal solutions to fix the SCM's environmental blind spot: invoking the Agreement on Agriculture ("AoA") for some subsidies; using the SCM's definition of subsidies to exclude some forms of support for renewable energy—especially Feed-in Tariffs ("FITs")—from the WTO's subsidies regime entirely; adopting a flexible interpretation of the General Agreement on Tariffs and Trade's ("GATT") Article XX's environmental exception such that it may apply to subsidies; and negotiating a new WTO agreement for renewable subsidies. This article argues that the best approach would be to apply GATT Article XX to the SCM.

Part II of this article provides background information on renewable subsidies and the current WTO regime governing subsidies. Part III discusses the proposed legal solutions to the WTO's green subsidy problem. Part IV compares the proposed solutions and concludes that applying GATT Article XX to the SCM is the best approach.

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three Working Group ("WG") reports and a Synthesis Report ("SYR"). *Id.* All IPCC documents are available on the IPCC website: <http://www.ipcc.ch/> (last visited Jan. 16, 2015).

3. See INT'L TRADE ADMIN., FACT SHEET: COMMERCE FINDS DUMPING & SUBSIDIZATION OF CRYSTALLINE SILICON PHOTOVOLTAIC CELLS, WHETHER OR NOT ASSEMBLED INTO MODULES FROM THE PEOPLE'S REPUBLIC OF CHINA (2012), [http://enforcement.trade.gov/download/factsheets/factsheet\\_prc-solar-cells-ad-cvd-finals-20121010.pdf](http://enforcement.trade.gov/download/factsheets/factsheet_prc-solar-cells-ad-cvd-finals-20121010.pdf) (Department of Commerce finding that China subsidized solar industry); see also Melissa C. Lott, *Solyndra: Soft Markets and Chinese Subsidies*, SCI. AM. (Nov. 18, 2011), <http://blogs.scientificamerican.com/plugged-in/solyndra-soft-markets-chinese-subsidies-no-apologies>.

4. Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14 [hereinafter SCM].

5. For example, Article XX of the General Agreement on Tariffs and Trade ("GATT") includes an environmental exception for tariffs and other non-subsidy measures. General Agreement on Tariffs and Trade, Oct. 30, 1947, Annex 1A, 55 U.N.T.S. [hereinafter GATT].

6. The SCM was negotiated during the 1980s and 1990s, a period when the world's economic consensus approved of privatization and disapproved of subsidies. See, e.g., John B. Goodman & Gary W. Loveman, *Does Privatization Serve the Public Interest?*, 69 HARV. BUS. REV. 26, 26 (1991).

## II. BACKGROUND

This section provides background information on both renewable subsidies and WTO law governing subsidies. Subpart A discusses the economics and policy of renewable subsidies. Subpart B discusses WTO law governing subsidies, including GATT Article XVI, the AoA, and the SCM.

### A. RENEWABLE SUBSIDIES

Investment in renewable energy is a core strategy to address climate change.<sup>7</sup> According to the influential *Stern Review on the Economics of Climate Change*, climate change is the “greatest and widest-ranging market failure ever seen.”<sup>8</sup> Specifically, renewable energy provides society with benefits, which economists call positive externalities. The current price of renewable energy fails to take these benefits into account, and so the price is higher than would be socially optimal.<sup>9</sup> Similarly, fossil fuels burden society with costs—particularly climate change—which economists call negative externalities.<sup>10</sup> But these fuels’ current price fails to take these societal costs into account, so the price is lower than would be socially optimal.<sup>11</sup>

The standard economic response to correct this sort of market failure would be government intervention that forces renewable energy and fossil fuel prices to reflect the benefits and costs each places on society.<sup>12</sup> Specific measures to achieve this end include Pigovian taxes on carbon emissions,<sup>13</sup> as well as subsidies intended to redress economic injustices or imbalances.<sup>14</sup> Governments employ a variety of measures to transfer an economic advantage to companies investing in renewables or to consumers who buy renewable energy, including grants, loans, tax incentives, and price support.<sup>15</sup> Price supports include FITs.<sup>16</sup> Of these measures, two have given rise to disputes at the WTO for their impacts on other countries’ renewable industries: FITs and local content requirements.

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7. See Luca Rubini, *The Subsidization of Renewable Energy in the WTO: Issues and Perspectives*, NCCR TRADE REGULATION, 1, 2-5 (June 2011).

8. NICHOLAS STERN, STERN REVIEW: THE ECONOMICS OF CLIMATE CHANGE i (2007).

9. Rubini, *supra* note 7, at 5.

10. STERN, *supra* note 8, at 363.

11. *Id.* at xix-xx.

12. See *id.* at 35.

13. A Pigovian tax is a tax applied to an economic activity that generates negative externalities. Agnar Sandmo, *Pigovian taxes*, in 6 THE NEW PALGRAVE DICTIONARY OF ECONOMICS 435 (Steven N. Durlauf & Lawrence E. Blume eds., 2008).

14. STERN, *supra* note 8, at 35.

15. See MIGUEL MENDONÇA ET AL., POWERING THE GREEN ECONOMY: THE FEED-IN TARIFF HANDBOOK (2009); Anthony D. Owen, *Renewable Energy: Externality Costs as Market Barriers*, 34 ENERGY POL’Y 632 (2006); Rubini, *supra* note 7, at 5; Simonetta Zarrilli, *Domestic Taxation of Energy Products and Multilateral Trade Rules: Is This a Case of Unlawful Discrimination?*, 37 J. WORLD TRADE 359 (2003).

16. See generally MIGUEL MENDONÇA, FEED-IN TARIFFS: ACCELERATING THE DEPLOYMENT OF RENEWABLE ENERGY (2012); MENDONÇA ET AL., *supra* note 15; Mario Ragwitz et al., *Promotion of Renewable Energy Sources: Effects on Innovation*, 2 INT’L J. PUBLIC POL’Y 35, 56 (2007).

A FIT is a minimum guaranteed price that an electricity company must pay a private independent producer for a kilowatt hour of renewable energy.<sup>17</sup> In effect, FITs require governments or electricity companies that make their money from fossil fuels to provide stable prices and demand upon which renewable energy producers can rely.<sup>18</sup> FITs have proven successful, especially as part of a broad package of support measures that also includes tax deductions, “soft” loans, and investment incentives for selected technologies.<sup>19</sup>

A local content requirement is an obligation to use a certain percentage of domestic input in the manufacture of a given product.<sup>20</sup> Such requirements are widely considered to be effective for achieving industrial policy objectives.<sup>21</sup> They also grant sure and fast development of the domestic industry.<sup>22</sup> Accordingly, governments use these requirements to ensure the steady development of crucial or strategic sectors,<sup>23</sup> often including renewable energy.<sup>24</sup> Local content requirements for renewable energy can be a part of many industrial development schemes, such as subsidies, investment agreements, partnerships, and joint ventures with foreign actors.<sup>25</sup>

China has implemented local content requirements with perhaps the greatest intensity and success. Thanks to a general “Buy Chinese” policy that favors local manufacturers, seventy low-cost local producers now supply about seventy-five percent of new wind turbines.<sup>26</sup> This policy was first embodied in the Wind

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17. MENDONÇA ET AL., *supra* note 15, at xxi-xxii.

18. *Id.*

19. See, e.g., Lucy Butler & Karsten Neuhoff, *Comparison of Feed-in Tariff, Quota and Auction Mechanisms to Support Wind Power Development*, 33 RENEWABLE ENERGY 1854 (2008).

20. Luca Rubini, *Ain't Wastin' Time No More: Subsidies for Renewable Energy, the SCM Agreement, Policy Space, and Law Reform*, 15 J. INT'L ECON. L. 525, 530 (2012).

21. *Id.* at 551.

22. See generally HA-JOON CHANG, *KICKING AWAY THE LADDER: DEVELOPMENT STRATEGY IN HISTORICAL PERSPECTIVE* (2003); DANI RODRIK, *ONE ECONOMICS, MANY RECIPES: GLOBALIZATION, INSTITUTIONS, AND ECONOMIC GROWTH* (2008).

23. In particular, local content requirements have become an effective regulatory tool for foreign direct investments in developing countries, where it assists developing countries in realizing employment and technology transfer benefits. See Chi-Chur Chao & Eden S.H. Yu, *Content Protection, Urban Unemployment and Welfare*, 26 CAN. J. ECON. 481 (1993); Kala Krishna & Motoshige Itoh, *Content Protection and Oligopolistic Interactions*, 55 REV. ECON. STUD. 107 (1988); Sajal Lahiri & Yoshiyasu Ono, *Foreign Direct Investment, Local Content Requirement, and Profit Taxation*, 108 ECON. J. 444 (1998); Florencio Lopez-de-Silanes et al., *Trade Policy Subtleties with Multinational Firms*, 40 EUR. ECON. REV. 1605 (1996); Martin Richardson, *Content Protection with Foreign Capital*, 24 OXFORD ECON. PAPERS 103 (1993).

24. See, e.g., GOV'T OF INDIA, MINISTRY OF NEW & RENEWABLE ENERGY, REPORT OF THE WORKING GROUP ON NEW AND RENEWABLE ENERGY FOR XITH FIVE YEAR PLAN (2007-12) (2006); THE TWELFTH FIVE-YEAR PLAN FOR NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT OF THE PEOPLE'S REPUBLIC OF CHINA 46-47 (English Section of the Cent. Document Translation Dep't of the Cent. Compilation & Translation Bureau, Beijing, China trans., 2011).

25. See, e.g., KPMG, TAXES AND INCENTIVES FOR RENEWABLE ENERGY 16-17 (2011), <https://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/Taxes-Incentives-Renewable-Energy-2011.pdf>.

26. See, e.g., Vivian Wai-yin Kwok, *Weakness in Chinese Wind Power*, FORBES (July 20, 2009), <http://www.forbes.com/2009/07/20/china-wind-power-business-energy-china.html>.

Power Concession Program adopted in 2004 with a twenty-year operation period and now revoked after a challenge brought by the United States at the WTO.<sup>27</sup> This government-run bidding program encouraged domestic and foreign companies to develop wind projects, but required foreign enterprises to procure locally seventy percent of parts and components used for products manufactured in China.<sup>28</sup> China's Renewable Energy Law extended this requirement to all renewable energy projects throughout the country.<sup>29</sup>

## B. WTO LAW GOVERNING SUBSIDIES

Governments have used subsidies since at least the sixteenth century, both to promote national economic, social, and political policy as well as to correct market distortions.<sup>30</sup> However, subsidies often have harmful, unfair effects on neighboring states' trade and production.<sup>31</sup> Moreover, subsidies distort competition because they provide domestic producers with a considerable advantage against foreign competitors.<sup>32</sup> Finally, one state's subsidies may prompt another state to subsidize its own industry or retaliate by blocking imports, which may in turn prompt the first state to increase its subsidization.<sup>33</sup> This launches a subsidies arms race leaving both states worse off than before.<sup>34</sup>

To address these issues, Article XVI of the original 1947 GATT provided some guidance on subsidies.<sup>35</sup> However, the original Article XVI was limited: It did not define subsidies and allowed member states to grant or maintain any subsidy

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27. *Wind Power in China*, ECOWORLD, <http://www.ecoworld.com/energy-fuels/wind-power-in-china.html> (last visited Sept. 13, 2015); Press Release, United States Trade Representative, China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute (June 2007), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged>; see also Request for Consultations by the United States, *China—Measures Concerning Wind Power Equipment*, WTO Doc. WT/DS419/1 (Jan. 6, 2011) [hereinafter *China—Wind*].

28. *Zhonghua Renmin Gongheguo Ke Zaisheng Nengyuan Fa* (2009 xiuding) ((中华人民共和国可再生能源法) (2009 修订)) [Renewable Energy Law of the People's Republic of China (2009 Revision)] (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 2009).

29. The *Renewable Energy Law of the People's Republic of China* provides a framework for government intervention in the renewable energy sector, in order to increase production from renewable sources and boost the Chinese industry. *Id.* Within this framework, local production plays a central role. *Id.* Article 24 states that "The Government budget establishes renewable energy development fund to support," among others "(5) Localized production of the equipment for the development and utilization of renewable energy." *Id.*

30. For a more detailed historical analysis and background information on subsidies, see JOHN H. JACKSON, *WORLD TRADE AND THE LAW OF GATT* (1969); PAOLO PICONE & ALDO LIGUSTRO, *DIRITTO DELL'ORGANIZZAZIONE MONDIALE DEL COMMERCIO* 229 (2002); ENNIO TRIGGIANI, *GLI AIUTI STATALI ALLE IMPRESE NEL DIRITTO INTERNAZIONALE E COMUNITARIO* 1-41 (1993).

31. WORLD TRADE ORG., *WORLD TRADE REPORT 2006: EXPLORING THE LINKS BETWEEN SUBSIDIES, TRADE AND THE WTO* 55-65 (2006), [https://www.wto.org/english/res\\_e/booksp\\_e/anrep\\_e/world\\_trade\\_report06\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report06_e.pdf).

32. *Id.* at 55.

33. *Id.*

34. *Id.*

35. GATT, *supra* note 5.

as long as they notified other contracting parties.<sup>36</sup> Subsidies were then only addressed when they caused or threatened to cause serious prejudice to the interests of any other contracting party.<sup>37</sup> Even in this event, the state granting the subsidy was only required, upon request, to “discuss with the other contracting party or parties concerned, or with the Contracting Parties, the possibility of limiting the subsidization.”<sup>38</sup>

International regulation of subsidies<sup>39</sup> began in earnest with the establishment of the WTO in 1995.<sup>40</sup> The Marrakesh Agreement Establishing the World Trade Organization incorporated Article XVI into the new international trade regime and provided three new, substantive sources of law governing subsidies: the SCM for industrial subsidies;<sup>41</sup> the AoA for agricultural subsidies;<sup>42</sup> and a robust new dispute resolution system, which has generated non-binding case law that may elucidate how the above agreements are to be interpreted.<sup>43</sup> Each of these sources of law is discussed in turn below.

### 1. Agreement on Subsidies and Countervailing Measures (“SCM”): Prohibited, Actionable, and Nonactionable Subsidies

The SCM is not intended to discipline all manners of government support for industry, but rather focuses on government support that distorts international trade.<sup>44</sup> Different subsidies target different production stages and objectives, which means they have disparate impacts on trade; accordingly, the WTO’s

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36. *Id.*

37. *Id.*

38. *Id.*

39. See generally PETER VAN DEN BOSSCHE & WERNER ZDOUC, *THE LAW AND POLICY OF THE WORLD TRADE ORGANIZATION: TEXT, CASES AND MATERIALS* 744-845 (3d ed. 2013); EDWIN VERMULST & FOLKERT GRAAFSA, *WTO DISPUTES: ANTI-DUMPING, SUBSIDIES AND SAFEGUARDS* 281-459 (2002).

40. The WTO came into being on January 1, 1995 and is the successor to GATT. *The GATT Years: from Havana to Marrakesh*, WORLD TRADE ORG., [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/fact4\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact4_e.htm) (last visited Sept. 3, 2015). After World War II, the Bretton Woods Conference took place in 1944 with the objective of creating relevant forums for promoting economic recovery, maintaining stability, and encouraging open markets. *Id.* In particular, GATT was signed after the failure of the negotiating governments to create the International Trade Organization (“ITO”). *Id.* During discussions regarding the ITO, fifteen states began parallel negotiations for GATT as a way to attain basic and immediate tariff reductions even before the adoption of the ITO. *Id.* When the ITO failed in 1950, only GATT survived. *Id.* GATT, initially thought of as a provisional agreement, has been ruling the international trade arena for over 60 years. *Id.*

41. SCM, *supra* note 4.

42. Agreement on Agriculture, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 410 [hereinafter AoA].

43. See, e.g., Panel Reports, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector and Canada—Measures Relating to the Feed-In Tariff Program*, WTO Docs. WT/DS412/R, WT/DS426/R (adopted Dec. 19, 2012) [hereinafter *Canada Panel Reports*]; Appellate Body Reports, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector and Canada—Measures Relating to the Feed-In Tariff Program*, WTO Docs. WT/DS412/AB/R, WT/DS426/AB/R (adopted May 6, 2013) [hereinafter *Canada Appellate Body Reports*].

44. See SCM, *supra* note 4, at art. 5.

regulatory approach also varies.<sup>45</sup> The WTO use to treat favorably subsidies that may have distorted trade, but had one of a few, preapproved policy goals; for example, research and development.<sup>46</sup> At the same time, the WTO has always stringently opposed subsidies that distort trade, such as export subsidies and local content requirements.<sup>47</sup>

The SCM achieves these policies through a series of legal tests. First, SCM Article 1 defines a subsidy as a financial contribution by a government or public body that confers a benefit to an enterprise.<sup>48</sup> SCM Article 2 defines “specific” subsidies as those limited to certain enterprises.<sup>49</sup> Only specific subsidies are subject to the SCM; all other support that does not meet that definition falls outside of the scope of the agreement.<sup>50</sup>

Once a specific subsidy has been established, it falls into one of three categories: prohibited, actionable, or nonactionable.<sup>51</sup> Each category is subject to its own set of rules.

SCM Article 3 governs prohibited subsidies—subsidies contingent on export performance and use of local content.<sup>52</sup> One example is China’s Wind Power Concession Program, discussed above, which granted subsidies to wind farms conditioned on using Chinese-made components. In the eyes of the WTO, prohibited subsidies are seen as a “double measure of support” and trade-distorting *per se*.<sup>53</sup> This is precisely why, at the WTO level, local content subsidies are—together with export subsidies—given stricter treatment: total prohibition. Nevertheless, as a policy matter, obligations to source certain inputs locally are effective tools for both industrial and environmental objectives.<sup>54</sup>

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45. See GUSTAVO E. LUENGO HERNANDEZ DE MADRID, *REGULATION OF SUBSIDIES AND STATE AIDS IN WTO AND EC LAW: CONFLICTS IN INTERNATIONAL TRADE LAW* 8 (2007).

46. *See id.* at 455.

47. *Id.* at 455, 457.

48. SCM, *supra* note 4, at art. 1.

49. *Id.* at art. 2.

50. *Id.* at art. 1.

51. For a general overview of the regulation of subsidies provided in the WTO, see R. K. GUPTA, *ANTI-DUMPING AND COUNTERVAILING MEASURES: THE COMPLETE REFERENCE* 107 (1996); ANDREAS F. LOWENFELD, *INTERNATIONAL ECONOMIC LAW* 215-61 (2d ed. 2008); MICHAEL J. TREBILCOCK ET AL., *THE REGULATION OF INTERNATIONAL TRADE* 364-410 (4th ed. 2013); JEFFREY WAINCYMER, *WTO LITIGATION: PROCEDURAL ASPECTS OF FORMAL DISPUTE SETTLEMENT* 760 (2002); *THE WORLD TRADE ORGANIZATION: LEGAL, ECONOMIC AND POLITICAL ANALYSIS* 687-734 (Patrick F. J. Macrory et al. eds., 2005); Gary N. Horlick & Peggy A. Clarke, *WTO Subsidies Discipline During and After the Crisis*, 13 J. INT’L ECON. L. 859 (2010); Debra P. Steger, *The Subsidies and Countervailing Measures Agreement: Ahead of its Time or Time for Reform?*, 44 J. WORLD TRADE 779 (2010).

52. SCM, *supra* note 4, at art. 3.

53. Most developing and least developed countries see both export and local content subsidies as crucial to their industrialization and development, while industrialized nations have always considered this particular category of governmental support as severely and inherently trade-distorting. *See Steger, supra* note 51, at 787.

54. *See, e.g.,* Aaron Cosby, *Renewable energy subsidies and the WTO: The wrong law and the wrong venue*, SUBSIDY WATCH 1-3 (June 2011), [http://www.iisd.org/gsi/sites/default/files/sw44\\_jun\\_11.pdf](http://www.iisd.org/gsi/sites/default/files/sw44_jun_11.pdf).

SCM Article 6 governs actionable subsidies—subsidies that are not trade-distorting per se, but nevertheless may in fact have adverse impacts on another WTO member.<sup>55</sup> One hypothetical example may be loan guarantees for electric cars, which are not trade-distorting per se, but which may give domestic electric car producers an advantage that harms foreign electric car producers. However, it is important to note that the WTO will only address a subsidy as actionable if the complaining country shows that the subsidy has an actual adverse impact on its interests.<sup>56</sup> If not prohibited or actionable, a subsidy is permitted.<sup>57</sup>

SCM Article 8 initially provided for a third category of subsidies—so-called nonactionable subsidies.<sup>58</sup> Such subsidies were deemed not actionable regardless of their impact on another member, and included subsidies for research and development, assistance to disadvantaged regions, and assistance to promote adaptation to environmental requirements.<sup>59</sup> Nonactionable subsidies expired in 2000.<sup>60</sup>

## 2. Agreement on Agriculture (AoA)

The AoA split subsidies regimes into agricultural and industrial products.<sup>61</sup> As clarified in Annex 1 to the Agreement, agricultural products are those listed in Chapters 1 to 24 of the Harmonized Commodity Description and Coding System.<sup>62</sup> In contrast to the SCM's prohibition of all export subsidies, the AoA permits them in some cases.<sup>63</sup> The AoA also opts for a more effective proscriptive approach—it is not necessary to demonstrate the adverse impact of a measure; all that matters is whether the subsidy complies with the provisions of the Agreement.<sup>64</sup>

The main goal of the AoA<sup>65</sup> is to progressively reduce “agricultural support and protection” through a comprehensive strategy covering three “pillars,” or

55. SCM, *supra* note 4, at art. 6.

56. *Id.* at arts. 5-7.

57. *Id.* at arts. 3, 5.

58. *Id.* at art. 8.

59. *Subsidies and Countervailing Measures: Overview—Agreement on Subsidies and Countervailing Measures* (“SCM Agreement”), WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/scm\\_e/subs\\_e.htm](https://www.wto.org/english/tratop_e/scm_e/subs_e.htm) (last visited Sept. 3, 2015).

60. *See* SCM, *supra* note 4, at art. 8.

61. This choice is often motivated by the need to have separate discussions when an issue is related to two different agreements. Moreover, keeping the discussion about subsidies in one forum would have made the task of finding a suitable solution to this complex problem even harder. *See* RESEARCH HANDBOOK ON THE WTO AGRICULTURE AGREEMENT: NEW AND EMERGING ISSUES IN INTERNATIONAL AGRICULTURAL TRADE LAW 1 (Joseph A. McMahon & Melaku Geboye Desta eds., 2012) [hereinafter RESEARCH HANDBOOK].

62. AoA, *supra* note 42, Annex 1.

63. The same approach is visible in Articles 5 and 6 of the SCM, significantly titled *Adverse Effects* and *Serious Prejudice*, as well as in Part III of the Agreement dealing with *actionable* subsidies. SCM, *supra* note 4, at arts. 5, 6.

64. AoA, *supra* note 42, at arts. 6, 9.

65. *See* RESEARCH HANDBOOK, *supra* note 61, at 7.

areas of action: market access, domestic support, and export subsidies.<sup>66</sup> As far as domestic support is concerned, the AoA classifies subsidies into three “Boxes”—Amber, Blue, and Green—depending on their impacts on production and trade.<sup>67</sup> The Amber Box includes forms of support that must be progressively phased out by the member states; however, countries that provided such support during the base period are not asked to remove it altogether, but rather to undertake reduction commitments.<sup>68</sup> Such countries have also agreed to cap their annual total expenditure on domestic support, expressed in the so-called Aggregate Measure of Support (“AMS”).<sup>69</sup> The Blue Box contains production-limiting programs, but are not prohibited under the AoA.<sup>70</sup> Reduction commitments do not apply to those subsidies that cause at most minimal distortion of trade or production and are covered by the Green Box.<sup>71</sup>

### 3. Case Law under the Agreement on SCM

Besides the SCM and AoA, the Marrakesh Agreement Establishing the World Trade Organization also enacted the Understanding on Rules and Procedures Governing the Settlement of Disputes, also called the Dispute Settlement Understanding.<sup>72</sup> This robust system for resolving trade disputes established two new institutions: WTO panels and the WTO Appellate Body.<sup>73</sup> WTO panels are a hybrid between arbitral panels and U.S. district courts—like arbitral panels, they are composed anew for a specific dispute and consist of three ad hoc arbiters, and like U.S. district courts, they have the power to resolve questions of law and fact

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66. The reduction of domestic support to the agricultural sector is still at the core of the Doha Development Agenda. Endorsed mostly by developing countries, the need to further reduce agricultural support is obvious from the July 2008 Package drafted in Geneva and seen as an important stepping-stone in the Doha negotiations. *Doha Development Agenda: Doha Work Programme—The July 2008 package*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/dda\\_e/meet08\\_e.htm](https://www.wto.org/english/tratop_e/dda_e/meet08_e.htm) (last visited Sept. 10, 2015).

67. RESEARCH HANDBOOK, *supra* note 61, at 7. The Amber Box includes subsidies that are most directly linked to production levels; the Blue Box contains production-limiting programs that still distort trade; and the Green Box covers measures that cause not more than minimal distortion of trade or production. See INT'L CTR. FOR TRADE AND SUSTAINABLE DEV., *AGRICULTURAL SUBSIDIES IN THE WTO GREEN BOX: ENSURING COHERENCE WITH SUSTAINABLE DEVELOPMENT GOALS 1-2* (Sept. 2009). See generally TONI HARMER, *BIOFUELS SUBSIDIES AND THE LAW OF THE WTO* (2009).

68. On the other hand, all those countries that did not provide such support are not allowed to introduce it. AoA, *supra* note 42.

69. The AMS is defined in AoA Article 1(a) as “the annual level of support, expressed in monetary terms, provided for an agricultural product in favour of the producers of the basic agricultural product or non-product-specific support provided in favour of agricultural producers in general . . .” *Id.* at art. 1. Moreover, Annex 3 gives guidelines on the calculation of the AMS. *Id.*, Annex 3.

70. *Agriculture Negotiations: Background Fact Sheet*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/agric\\_e/agboxes\\_e.htm](https://www.wto.org/english/tratop_e/agric_e/agboxes_e.htm) (last visited Oct. 9, 2015).

71. AoA, *supra* note 42.

72. Dispute Settlement Rules: Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter DSU].

73. *Id.* at art. 6.

and issue a decision, called a panel report, which is binding on the parties.<sup>74</sup> WTO panel reports can be appealed to the WTO Appellate Body, a standing body of seven members empowered to resolve questions of WTO law, like a U.S. appellate court.<sup>75</sup> However, unlike a U.S. appellate court, the WTO Appellate Body lacks the power to remand a case to a panel to resolve questions of fact, which may leave some cases unresolved.<sup>76</sup> WTO panel and Appellate Body reports are not binding authority such as common law cases.<sup>77</sup> Nevertheless, WTO panels and the Appellate Body often rely on past reports as persuasive authority, allowing a sort of case law to develop.<sup>78</sup>

Five disputes related to renewable energy have been initiated under the SCM, although only two have produced WTO panel and Appellate Body reports that can help clarify the WTO approach towards such types of governmental support. No disputes related to renewable energy have been initiated under the AoA.

What can be concluded from the analysis below is that both the panel and Appellate Body have interpreted the SCM quite narrowly, so as to not leave much space to states' policies in favor of renewables. This contrasts with the inarguable evolution of the WTO case law in favor of the objectives articulated in the WTO preamble for balancing trade and non-trade concerns, especially the environment.<sup>79</sup> It is also worth noting that in contrast to the five disputes regarding

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74. *See id.* at arts. 6, 8, 11.

75. *Id.* at art. 17.

76. *See Canada Appellate Body Reports*, *supra* note 43, ¶ 5.224 (Appellate Body unable to complete legal analysis due to lack of facts).

77. *See DSU*, *supra* note 72, at art. 17.

78. Appellate Body Report, *Canada—Measures Affecting the Export of Civilian Aircraft*, ¶ 157, WTO Doc. WT/DS70/AB/R (adopted Aug. 20, 1999) [hereinafter *Civilian Aircraft*] (Appellate Body applying market benchmarking test from previous reports).

79. The first time environmental concerns vis-à-vis free trade was the subject of debate was in the context of the GATT *Tuna I* case. The panel took an extremely narrow approach to GATT, so as to leave no room for environmental measures. *See Report of the Panel, United States—Restrictions on Imports of Tuna*, DS21/R (Sept. 3, 1991) 33 I.L.M. 839 (1994) (unadopted). There are three generations of cases. The first generation of GATT panels dealing with trade and environment issues is composed of five cases: *Canadian Tuna*, *Canadian Herring and Salmon*, *Thai Cigarettes*, *Tuna/Dolphin I*, and *Superfund*. These panels showed a certain unwillingness to adequately take into account environmental needs. *See Panel Report, Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes*, DS10/R (Oct. 5, 1990), GATT B.I.S.D. (37th Supp.) (1990) [hereinafter *Thailand—Cigarettes*]; Panel Report, *Canada—Measures Affecting Exports of Unprocessed Hearing and Salmon*, L/6268 (Nov. 20, 1987), GATT B.I.S.D. (35th Supp.) (1988) [hereinafter *Canada—Hearing and Salmon*]; Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, L/6175 (June 5, 1987), GATT B.I.S.D. (34th Supp.) (1987) [hereinafter *United States—Imported Substances*]. They left little hope for the future of environmental measures with a trade-hindering impact: it would have been difficult to conceive a darker picture, from an environmental point of view, for the trade-environment relationship. *See Thailand—Cigarettes*, *supra* note 79; *Canada—Hearing and Salmon*, *supra* note 79; *United States—Imported Substances*, *supra* note 79. The second generation of cases (*Tuna/Dolphin II* and *C.A.F.E.*) opened the door to a more environmentally friendly interpretation of GATT provisions and has deeply influenced the trade and environment decisions taken since the establishment of the WTO. *See EU versus US: Car Taxes*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/envir\\_e/edis06\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/edis06_e.htm) (last visited Oct. 10, 2015). The third generation of cases coincides with the creation of the WTO. Despite the persistence of

renewables, no dispute has ever been brought in relation to measures supporting fossil fuels—especially oil.<sup>80</sup> On the other hand, several disputes have been brought concerning export and local content subsidies.<sup>81</sup>

The only two disputes that have produced panel and Appellate Body reports are *Canada—Feed-In Tariff Program* and *Canada—Renewable Energy*, brought against Canada by the EU and Japan, respectively.<sup>82</sup> The same Canadian measures and WTO provisions were at issue in both disputes.<sup>83</sup> Both the EU and Japan challenged a FIT program established by the Canadian province of Ontario in 2009.<sup>84</sup> Like all FIT programs, Ontario's set high, guaranteed, long-term prices at which renewable energy generation facilities could sell their product.<sup>85</sup> However, Ontario's FIT also required a certain percentage of labor and manufacturing input in order to be eligible for the program.<sup>86</sup> The complainants argued that this eligibility requirement was a local content requirement, and therefore the FIT program was prohibited under SCM Article 3.<sup>87</sup> In reports circulated on December 19, 2012, the panels rejected the complainants' challenges, reasoning that Ontario's FIT did not meet the definition of a subsidy under the SCM, and therefore that it could not be a prohibited local content subsidy under SCM Article 3.<sup>88</sup> However, the analysis section, below, discusses how the report

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several procedural obstacles, the cases of this generation can be read as more open and sensitive to environmental issues. See Appellate Body Report, *United States—Standards for Reformulated and Conventional Gasoline*, ¶ 70, WTO Doc. WT/DS2/AB/R (adopted May 20, 1996); Appellate Body Report, *EC Measures Affecting Meat and Meat Products*, ¶ 123, WTO Doc. WT/DS26/AB/R (adopted Jan. 16, 1998); Appellate Body Report, *United States—Import Prohibition of Certain Shrimps and Shrimp Products*, ¶ 4, WTO Doc. WT/DS58/AB/R (adopted Oct. 12, 1998); Appellate Body Report, *European Communities—Measures Affecting the Prohibition of Asbestos and Asbestos Products*, ¶ 2, WTO Doc. WT/DS135/AB/R (adopted Mar. 12, 2001); see also John H. Jackson, *Comments on Shrimp/Turtle and the Product/Process Distinction*, 11 EUR. J. INT'L L. 303, 303-07 (2000).

80. The *United States—Standards for Reformulated and Conventional Gasoline* dispute deals with a petroleum-derived product, and specifically concerns a U.S. measure providing imported and domestic gasoline with different treatments. While it certainly offers incredible insights on the interpretation of several GATT rules, it does not address the central theme of this article—the specific role played by energy in the WTO framework. See Paolo Davide Farah & Elena Cima, *Energy Trade and the WTO: Implications for Renewable Energy and the OPEC Cartel*, 16 J. INT'L ECON. L. 707, 707-40 (2013); Paolo Davide Farah & Elena Cima, *L'energia nel contesto degli accordi dell'OMC: sovvenzioni per le energie rinnovabili e pratiche OPEC di controllo dei prezzi*, 2 DIRITTO DEL COMMERCIO INTERNAZIONALE 343, 343-81 (2013).

81. See, e.g., *Canada Panel Reports*, *supra* note 43.

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

87. The other claims regarded the alleged violation of Article 2.1 of the Agreement on Trade Related Investment Measures (“TRIMS”) and GATT Article III:4. *Id.*; *Canada Appellate Body Reports*, *supra* note 43.

88. The Panel rejected the complainants' claim regarding the violation of SCM Articles 3.1(b) and 3.2 because the complainant could not prove that a “benefit” was conferred through the measures at issue and therefore could not prove the existence of a benefit according to Article 1 of the SCM. *Canada Panel Reports*, *supra* note 43, ¶ 8.3. The other claim—regarding the violation of TRIMS Article 2.1 and GATT Article III:4—was accepted. *Id.* ¶ 7.222.

circulated by the Appellate Body casts doubt on the accuracy of the panels' reasoning.<sup>89</sup>

The third dispute is *China—Measures Concerning Wind Power Equipment*.<sup>90</sup> In 2010, the United States carried out an investigation of a broad variety of Chinese policies and practices affecting trade and investment in wind technology.<sup>91</sup> Based on the results of the investigation, the United States requested consultations with China at the WTO on February 16, 2011—often the first step in a WTO dispute.<sup>92</sup> During these consultations, the United States did not cover all the issues raised in the investigation, but rather focused on subsidies.<sup>93</sup> The United States stated its view that the subsidies provided to Chinese wind turbine manufacturers under the Special Fund program—through which Chinese manufacturers of wind turbines and of components of wind turbines could receive multiple grants—were prohibited under SCM Article 3 because they were conditioned upon the use of domestic goods.<sup>94</sup> Following those consultations, China took action formally revoking the legal measure that had created the Special Fund program, ending the WTO dispute before a panel or Appellate Body could address the issue.<sup>95</sup>

Two new requests for consultation were made in 2012 and 2013: *European Union and Certain Member States—Certain Measures Affecting the Renewable Energy Generation Sector* and *India—Certain Measures Relating to Solar Cells and Solar Modules*, respectively.<sup>96</sup> In the first case, China requested consultations with the EU, Greece, and Italy regarding certain FIT programs implemented by a number of EU member states in the renewable energy sector.<sup>97</sup> In the second, the United States challenged Indian measures relating to domestic content requirements under the Jawaharal Nehru National Solar Mission (“NSM”) for solar

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89. *Id.*

90. *China—Wind*, *supra* note 27.

91. The U.S. Trade Representative investigation was based on a petition filed on September 9, 2010 by the United Steelworkers. See Petition for Relief under Section 301 of the Trade Act of 1974, as amended, United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO CLC (USW) re: China Policies Affecting Trade and Investment in Green Technology, United States Trade Representative, Vol. 1 of 9: Petition and Exhibits Section 1 (2010), at 208, <https://ustr.gov/sites/default/files/09-09-2010%20Petition.pdf>. The United States then requested a consultation with the WTO Dispute Settlement Body. *China—Wind*, *supra* note 27.

92. *China—Wind*, *supra* note 27.

93. *Id.*

94. *Id.*

95. *China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute*, OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE (June 2011), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged>.

96. Request for Consultations by the United States, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS 456/1 (Feb. 6, 2013) [hereinafter *India—Solar Cells*].

97. Request for Consultations by China, *European Union and Certain Member States—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS452/1 (Nov. 5, 2012).

cells and solar modules.<sup>98</sup> As of the summer of 2015, neither dispute has produced a panel report that clarifies WTO law on renewable subsidies.

### III. ANALYSIS

Given the WTO law on subsidies outlined above, how can the WTO adjust to accommodate renewable subsidies? This section discusses three possible legal solutions that would not require a change to the text of any WTO agreement: interpreting the more permissive AoA to cover subsidies for ethanol; interpreting the definition of a subsidy under the SCM to exclude some government support—especially FITs—from the WTO subsidies regime entirely; and applying WTO precedent, logic, and established principles of international law to clarify the relationship between the SCM and GATT, such that the environmental exception in GATT Article XX may apply to the SCM. Finally, this section also discusses the possibility of negotiating a new WTO agreement specially designed for renewable subsidies.

#### A. APPLYING THE AOA TO SUBSIDIES FOR ETHANOL

Interpreting the more permissive AoA to cover ethanol subsidies would better accommodate renewable energy subsidies. There are subsidies that are permissible under the AoA, but contravene the SCM. This is why the classification of a product as agricultural or industrial has considerable consequences. For renewable subsidies, this distinction matters when classifying a product as ethanol or biodiesel. Most types of ethanol are listed in Chapters 1 to 24 of the Harmonized Commodity Description and Coding System,<sup>99</sup> and would therefore be classified as an agricultural product covered by the AoA. In contrast, biodiesel is listed elsewhere in the Harmonized System, and is therefore classified as an industrial product that falls under the SCM.

This means that ethanol-related subsidies fall into one of the AoA “Boxes.” It is generally agreed that most forms of support for ethanol production fall into the Amber Box, which grants them more favorable treatment than biodiesel subsidies receive under the SCM.

#### B. INTERPRETING THE DEFINITION OF A SUBSIDY TO EXCLUDE FEED-IN TARIFFS (“FITS”) FROM THE SCM

The disputes discussed above involve support for renewable energy conditioned on use of local content, although only Ontario’s FIT Program has produced

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98. *India—Solar Cells*, *supra* note 96.

99. See *The Tariff Classification of Ethanol (ethyl alcohol) for Fuel Use from Peru*, UNITED STATES CUSTOMS AND BORDER CONTROL (Mar. 18, 2004), <http://rulings.cbp.gov/index.asp?ru=k83935&qu=k83935&vw=detail>.

panel or Appellate Body reports.<sup>100</sup> However, the debate about FIT programs under the WTO is actually far broader than a debate about subsidies, and implicates the WTO's treatment of all types of regulatory measures.<sup>101</sup>

As a matter of policy, the WTO is designed to be more deferential to member states' regulations, which are a crucial aspect of sovereignty and are more closely linked to the specific priorities of each state than subsidies.<sup>102</sup> Accordingly, some authors argue that FITs should fall outside the scope of the SCM. For example, Robert Howse argues that FITs "represent a regulation of the electricity market, and their directive character goes to regulating market behavior and transactions, not imposing a governmental function on a private body."<sup>103</sup> At the same time, also as a matter of policy, the WTO should intervene when regulation distorts or restricts international trade and therefore harms other member states' industries.<sup>104</sup> Accordingly, other authors argue that regulatory measures that provide support that is as direct or immediate as subsidies should also be covered.<sup>105</sup>

SCM Article 1 provides a legal answer to this policy issue through its definition of a subsidy. Measures that qualify as subsidies are subject to the disciplines of the SCM; however, measures that fall short of the definition are not subsidies and are free of the SCM, akin to regulations. As discussed in Section II.B.1 above, the two necessary criteria for a subsidy under SCM Article 1 are a financial contribution by a government or public body and conferring a benefit to an enterprise. The panels and Appellate Body's application of these criteria to Ontario's FIT program are discussed in turn below.

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100. SCM Article 3.1(b) identifies the following subsidies as prohibited: "subsidies contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods." *See* SCM, *supra* note 4, at art. 3.

101. *See, e.g.,* Rubini, *supra* note 20.

102. Rubini, *supra* note 7, at 20. Luca Rubini frames the issue precisely, stressing that "the elusive and broad category of regulatory measures is generally considered to be beyond the reach of subsidy laws and is subject *only* to other provisions . . . . Regulatory measures remain the true, and unclear, frontier of subsidy laws" and "as a consequence, regulatory intervention has been the traditional object of other provisions. The breadth of the concept of regulation entails that its legal treatment is particularly complex . . . and often involves difficult distinctions between measure and measure." LUCA RUBINI, *THE DEFINITION OF SUBSIDY AND STATE AID: WTO AND EC LAW IN COMPARATIVE PERSPECTIVE* 191 (2009).

103. ROBERT HOWSE, *POST-HEARING SUBMISSION TO THE INTERNATIONAL TRADE COMMISSION: WORLD TRADE LAW AND RENEWABLE ENERGY: THE CASE OF NON-TARIFF MEASURES 22* (2005), [http://www.law.nyu.edu/sites/default/files/ECM\\_PRO\\_060053.pdf](http://www.law.nyu.edu/sites/default/files/ECM_PRO_060053.pdf).

104. The same reasoning underlies the carefully chosen wording of the *chapeau* of GATT Article XX, which makes exceptions to GATT rules contingent upon the proof of non-protectionist interests. *See* GATT, *supra* note 5, art. XX. Specifically, the *chapeau* of GATT Article XX allows members to adopt measures inconsistent with GATT rules provided that they fall in one of the paragraphs of the provision and are "subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade." *Id.*

105. RUBINI, *supra* note 102, at 121; Sadeq Z. Bigdeli, *Incentive Schemes to Promote Renewables and the WTO Law of Subsidies*, in *INTERNATIONAL TRADE REGULATION AND THE MITIGATION OF CLIMATE CHANGE* (Sadeq Z. Bigdeli et al. eds., 2009).

### 1. Does a FIT Provide a Financial Contribution?

SCM Article 1 enumerates governmental measures that qualify as financial contributions, thus providing for a high degree of certainty and predictability.<sup>106</sup> These enumerated measures are the direct transfer of funds; government revenue otherwise due that is foregone or not collected; and the provision of goods or services or the purchase of goods.<sup>107</sup> According to the same provision, these measures need not be public in nature: when entrusted or directed by the government, measures carried out by private entities still qualify as financial contributions.<sup>108</sup>

Moreover, the aforementioned enumerated measures are not mutually exclusive. The Appellate Body in the *Canada—Renewable Energy* and *Canada—Feed-In Tariff Program* disputes, quoting a previous dispute,<sup>109</sup> stated that “a transaction could be covered by more than one subparagraph” because there is “no ‘or’ included between the subparagraphs.” In this specific case, Japan had initially claimed that Ontario’s FIT program would qualify as both “direct transfer of funds” and “purchase of goods,” under SCM Article 1(a)(1)(i) and 1(a)(1)(iii).<sup>110</sup> The panel considered the FIT program as a “purchase of goods,” and ruled out the second possible qualification based on the assumption that such finding would infringe “[the] principle of [effective treaty interpretation]” by allowing the measure to fall into more than one Article 1 subparagraph.<sup>111</sup> The Appellate Body reversed the panel’s findings, holding that a measure may fall under two or more subparagraphs.<sup>112</sup> However, it deemed the claimant’s arguments that the FIT was a direct transfer of funds insufficient and only considered whether the FIT was a purchase of goods.<sup>113</sup>

However, the panels and the Appellate Body did agree that Ontario’s FIT program involved a purchase of goods. One of the panel’s main arguments was that the “Government of Ontario takes possession over electricity and therefore ‘purchases’ electricity.”<sup>114</sup> According to the panel, what is required by the term “purchase” is the mere “payment (usually monetary) in exchange for a good.”<sup>115</sup>

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106. See Steger, *supra* note 51, at 781, 784.

107. SCM, *supra* note 4, at art. 1.

108. SCM Article 1: “For the purpose of this Agreement, a subsidy shall be deemed to exist if: (iv) a government makes payments to a funding mechanism, or entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) above which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments.” *Id.* at art. 1. For a detailed analysis of SCM Article 1, see VERMULST & GRAAFSMA, *supra* note 39, at 281-305.

109. *Canada Appellate Body Reports*, *supra* note 43, ¶ 5.118.

110. *Id.*

111. *Id.*

112. *Id.*

113. *Id.*

114. *Id.* ¶ 7.224.

115. *Id.* ¶ 7.227.

A purchase of goods does not require that the entity purchasing the goods—in this case, the government—use the goods itself.<sup>116</sup> Nor does it require physical possession over the goods purchased.<sup>117</sup> Physical possession of electricity would be inherently impossible because it is “an intangible good that, in general, cannot be stored and must be consumed almost at the same time it is produced.”<sup>118</sup> Therefore, Ontario’s FIT program was deemed a purchase of goods, satisfying the first criterion to be a subsidy in the eyes of the WTO.

## 2. Does a FIT Confer a Benefit?

WTO panels and the Appellate Body have reasoned that analysis of whether a benefit exists should focus not on whether the recipient is better off than its competitors, but rather on whether the recipient is better off than it would have been without the financial contribution.<sup>119</sup> The panels in both *Canada—Renewable Energy* and *Canada—Feed-In Tariff Program* sought to apply this test to the FIT.<sup>120</sup>

In theory, support measures for renewables may not actually confer a benefit under this test, and are therefore not subsidies. As discussed previously, fossil fuel prices are unnaturally low, because they do not account for their negative externalities, including climate change. In contrast, renewable energy prices are unnaturally high because they fail to capture the positive externalities they provide society. This creates a condition of disadvantage for renewable energy producers—a disadvantage that FITs and similar support measures merely compensate for.<sup>121</sup> Therefore, such support may not put recipients in a better position than they would otherwise be, and therefore would not confer a benefit according to the test articulated above. Such measures’ impact on competition need not be considered under the same test.

In practice, however, the WTO panels and Appellate Body were not able to reach this question in the two Ontario FIT cases. Instead, the WTO panels found that the complaining parties had simply failed to prove the existence of a benefit,

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116. *Id.*

117. *Id.*

118. *Id.* ¶ 7.229.

119. Whether the subsidy affects competition needs to be analyzed later and separately when assessing the actual impact of the subsidy, and so this analysis will take place only when it is proved that the specific financial contribution falls within the scope of SCM Article 1. Bigdeli, *supra* note 105; Rubini, *supra* note 7, at 24-25; see also *Civilian Aircraft*, *supra* note 78, ¶ 149.

120. See *Civilian Aircraft*, *supra* note 78, ¶ 149.

121. These kinds of support measures, because renewable energy producers face costs significantly higher than those faced by producers of fossil fuels, “simply reimburse or compensate the enterprise for taking some action that it would otherwise not take, and the enterprise has not necessarily acquired any competitive advantage over other enterprises that neither take the subsidy nor have to perform these actions.” ROBERT HOWSE, CLIMATE CHANGE MITIGATION SUBSIDIES AND THE WTO LEGAL FRAMEWORK: A POLICY ANALYSIS 13 (2010).

and the WTO Appellate Body—which lacks the power of remand—found that it had insufficient facts to carry out its legal analysis. Ontario's FIT program was held not to have violated the SCM, although the above theory was never tested.

Specifically, in order to compare the position of the recipient with and without the financial contribution, WTO panels and the Appellate Body identify the specific marketplace and use it as a benchmark.<sup>122</sup> As stated by the Appellate Body, “that a financial contribution confers an advantage on its recipient cannot be determined in absolute terms, but requires a comparison with a benchmark, which, in the case of subsidies, derives from the market.”<sup>123</sup> However, in both Ontario FIT cases, the panels concluded that the marketplace identified by the complainants—the wholesale electricity market that existed in Ontario—could not be used as a reliable indicator because it was not competitive enough.<sup>124</sup> Although a market may serve as a benchmark even with some government intervention, government intervention that is so complete that it makes it impossible to determine whether a recipient is better off precludes using that marketplace as a benchmark.<sup>125</sup> This evaluation led the panels to conclude that the existence of a benefit had not been proved.<sup>126</sup>

The Appellate Body highlighted two problems with this analysis.<sup>127</sup> According to the Appellate Body, not only did the panels not follow the right sequence of steps in the benefit analysis—they should have started, rather than concluding, with the definition of the relevant market—but the analysis itself was inaccur-

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122. As stated by the Appellate Body in *Civilian Aircraft*, “the marketplace provides an appropriate basis for comparison in determining whether a ‘benefit’ has been ‘conferred’, because the trade-distorting potential of a ‘financial contribution’ can be identified by determining whether the recipient has received a ‘financial contribution’ on terms more favorable than those available to the recipient in the market.” *Civilian Aircraft*, *supra* note 78, ¶ 157. See also Panel Report, *Canada—Export Credits and Loan Guarantees for Regional Aircraft*, WTO Doc. WT/DS222/R (adopted Jan. 28, 2002); Panel Report, *United States—Tax Treatment for “Foreign Sales Corporations”* ¶¶ 7.278-7.296, WTO Doc. WT/DS108 (adopted Aug. 20, 2001). The same conclusion was reached by the panels in *Canada Panel Reports*, *supra* note 43, ¶ 7.272. Here, the panels stressed that the importance of the marketplace in this analysis is further supported by Article 14 of the SCM, which sets some rules for calculating the level of the subsidy in terms of the benefit to the recipient and which has been proved to be “relevant context in interpreting Article 1.1(b).” *Id.* According to this provision, for the government purchase of goods to confer a benefit, it needs to be made for “more than adequate remuneration,” and the adequacy of this remuneration must be evaluated in relation to the “prevailing market conditions” for the good in question in the country of purchase. *Id.*

123. *Civilian Aircraft*, *supra* note 78, ¶ 157.

124. Appellate Body Report, *United States—Final Countervailing Duty Determination with respect to Certain Softwood Lumber from Canada* ¶ 93, WTO Doc. WT/DS257/AB/R (adopted Jan. 19, 2004) [hereinafter *United States—Softwood Lumber*].

125. *Id.* Several authors argue that this is a problem affecting energy in general: the energy market is extremely distorted because of heavy public intervention, especially in support of fossil fuels. ROBERT HOWSE, *WORLD TRADE LAW AND RENEWABLE ENERGY: THE CASE OF NON-TARIFF BARRIERS* 11 (2009); RUBINI, *supra* note 102, at 226-33.

126. Panel Report, *United States—Final Countervailing Duty Determination with respect to certain Softwood Lumber from Canada*, WTO Doc. WT/DS257/R (adopted Oct. 27, 1999).

127. *Canada Appellate Body Reports*, *supra* note 43, ¶ 5.169.

rate.<sup>128</sup> The panels should not have limited their analysis to the benchmarks proposed in the complainants' argument, but should have considered additional factors discernible from the complainants' evidence and argument, including the type of contract, the size of the customer, and the type of electricity generated.<sup>129</sup> This may have allowed the panels to identify a market that could have been used as a benchmark and draw a different conclusion. Unfortunately, however, the insufficient factual findings in the panel report made it impossible for the Appellate Body to complete its legal analysis and make a determination. The Appellate Body therefore also held that there was not enough evidence to show that Ontario's FIT program conferred a benefit, which would satisfy the second criterion to be a subsidy in the eyes of the WTO.<sup>130</sup>

### 3. Can a FIT or Other Renewable Subsidy Be Justified Under GATT Article XX?

The Appellate Body avoided the question of whether FITs are subsidies subject to the SCM by finding that the complainants were not able to prove the existence of a benefit. However, what would have happened if the panels or Appellate Body had found that Ontario's FIT provided a financial contribution, conferred a benefit, and was contingent on the use of local content? Would the Appellate Body have been compelled to deem Ontario's FIT a prohibited subsidy? It may be interesting to explore legal justifications that would render permissible even renewable subsidies prohibited under SCM Article 3.

One such justification has proven extremely controversial: applying the general exceptions from GATT Article XX to the SCM. GATT Article XX allows member states to adopt and enforce measures that otherwise contravene GATT, so long as such measures relate to one of a list of enumerated purposes.<sup>131</sup> This list of purposes includes the "conservation of exhaustible natural resources," which is widely interpreted to cover environmental purposes.<sup>132</sup> In contrast, the SCM lacks an analogous exception clause, in part because the Agreement was negotiated in the late 1980s and early 1990s when the world was moving towards privatization and free markets.<sup>133</sup> Nevertheless, can GATT Article XX apply to a subsidy, even though subsidies are governed by the SCM and not GATT? In other words, can the SCM Agreement integrate the provisions of GATT Article XX?

Various arguments can be made against applying GATT Article XX to subsidies. First, other WTO treaties explicitly invoke GATT Article XX. For example, the Agreement on Sanitary and Phytosanitary Measures ("SPS") makes

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128. *Id.*

129. *Id.*

130. *Id.* ¶ 5,224.

131. GATT, *supra* note 5, at art. XX.

132. *Id.*

133. *See, e.g.,* Goodman & Loveman, *supra* note 6, at 26.

express reference to GATT Article XX(b) in SPS Articles 1 and 2.4.<sup>134</sup> The SCM contains no such explicit invocation.<sup>135</sup> Furthermore, not only does the SCM not mention GATT Article XX, but it specifically excludes from the scope of the provisions what is “provided in the Agreement on Agriculture.”<sup>136</sup> Finally, as discussed above, SCM Article 8 renders some subsidies nonactionable, including some subsidies for environmental purposes.<sup>137</sup> However, SCM Article 8 was allowed to elapse without being renewed. The existence of an exception provision similar to Article XX, but designed exclusively for the SCM Agreement could be seen as a sign that GATT Article XX should not apply to the SCM.<sup>138</sup>

On the other hand, arguments can also be made in favor of the applicability of GATT Article XX to the SCM. First, there is a hierarchy of different agreements within the WTO legal framework. GATT applies as soon as trade in goods is affected, and can be therefore classified as law governing trade generally—*lex generalis*. The SCM Agreement—as well as other agreements such as the SPS, the AoA, the Agreement on Technical Barriers to Trade, etc.—has a specific scope of application and therefore qualifies as law governing a specific subject matter—*lex specialis*. According to broadly accepted customary international law, as interpreted by numerous international courts and tribunals, law governing a specific subject matter takes precedence over general law in case of conflict—*lex specialis derogat legi generali*.<sup>139</sup> At the same time, *lex generalis* always remains available to fill gaps where *lex specialis* does not specifically contemplate otherwise. Accordingly, the SCM’s lack of an environmental exception is a gap in the *lex specialis*, allowing GATT Article XX to apply as *lex generalis*.

The second argument is purely logical. Specifically, GATT covers measures—such as total bans and quotas—which are widely known as more restrictive and trade-distorting than subsidies.<sup>140</sup> And yet GATT Article XX means that even such trade-distorting measure may be permissible for environmental purposes. Therefore, how can GATT Article XX end up allowing more distorting measures

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134. According to the SPS Preamble, members’ desire “to elaborate rules for the application of the provisions of GATT 1994 which relate to the use of sanitary or phytosanitary measures, in particular the provisions of Article XX(b),” Agreement on Sanitary and Phytosanitary Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 493, while Article 2.4 reads as follows: “[S]anitary or phytosanitary measures which conform to the relevant provisions of this Agreement shall be presumed to be in accordance with the obligations of the Members under the provisions of GATT 1994 which relate to the use of sanitary or phytosanitary measures, in particular the provisions of Article XX(b),” *id.* at art. 2.

135. SCM, *supra* note 4, at art. 3.

136. SCM, *supra* note 4, at art. 8.

137. *Id.*

138. Rubini, *supra* note 7, at 35.

139. With specific reference to this principle in the context of the WTO, see JOOST PAUWELYN, CONFLICTS OF NORMS IN PUBLIC INTERNATIONAL LAW: HOW WTO RELATES TO OTHER RULES OF INTERNATIONAL LAW 385 (2003). See also Tim Graewert, *Conflicting Laws and Jurisdictions in the Dispute Settlement Process of Regional Trade Agreements and the WTO*, 1 CONTEMP. ASIA ARB. J. 287 (2008).

140. GATT, *supra* note 5, at art. XI.

on environmental grounds, but ban less distorting subsidies for the same reason? Denying the applicability of the exceptions set out in GATT Article XX to subsidies would thus create irreversible and unjustified policy inconsistencies.

Finally, the last argument is based on WTO case law. In *China—Publications and Audiovisual Products*,<sup>141</sup> the Appellate Body agreed that GATT Article XX could apply to Article 5.1 of China's Protocol of Accession<sup>142</sup> for the first time, allowing for GATT Article XX to be possibly applied beyond the scope of GATT itself.<sup>143</sup> Like the SCM, China's Protocol of Accession does not expressly invoke GATT Article XX and has no analogous exception provision.<sup>144</sup> If the Appellate Body can apply GATT Article XX to China's Protocol of Accession, why not also apply it to the SCM? Nevertheless, there is still a crucial difference between China's Accession Protocol and the SCM: the latter—like the other WTO agreements—does not include a general “without prejudice clause” as written in China's Accession Protocol. Whether this obstacle could be overcome or not based on the legal relationship between the SCM and GATT provision is still debated.

Will the WTO adopt this argument based on the *lex specialis* principle? On the one hand, the WTO panel and Appellate Body may be unlikely to agree to the application of Article XX to the SCM, as, in the interpretation of WTO agreements, they have often adopted a narrow approach that appears to apply the Vienna Convention on the Law of Treaties—the treaty on interpreting treaties—mechanically. On the other hand, the recent ruling in *China—Publications and Audiovisual Products* case is a welcome development in WTO jurisprudence, which may signal the Appellate Body's willingness to take a bolder approach. Undoubtedly, allowing GATT Article XX to be used to justify any WTO violation—even beyond the list of objectives mentioned therein—would confer considerable power to the panel and the Appellate Body, increasing the discretion they already exercise in the “weighing and balancing” activity required under Article XX. Such a decision would also help clarify the complex WTO treaty structure and the relationship between the provisions of the WTO Agreements.

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141. Appellate Body Report, *China—Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WTO Doc. WT/DS363/AB/R (adopted Dec. 21, 2009).

142. *Id.* ¶¶ 205-233.

143. In this dispute, the United States challenged a variety of provisions within various Chinese measures as inconsistent with paragraph 5.1 of China's Accession Protocol, related to the regulation of the right to import the specific products at stake into China. Rubini, *supra* note 7, at 36. China invoked GATT Article XX(a) as a defense, especially relying upon the introductory clause of paragraph 5.1 of its Accession Protocol, which recognizes “China's right to regulate trade in a manner consistent with the WTO Agreement.” *Id.*

144. See World Trade Organization, Accession of the People's Republic of China, WTO Doc. WT/L/432 (2001).

#### 4. Do We Need a New WTO Agreement?

If none of the interpretative solutions discussed above are available, the only approach may be to negotiate a new WTO agreement or modify an existing WTO agreement. Unfortunately, new and modified WTO agreements are extremely difficult to reach, as demonstrated by the collapse of the Doha Development Round negotiations.<sup>145</sup> Undeniably, however, a new or modified agreement may allow WTO members to draft an agreement that better balances the need to prevent unfair subsidies with the need to cultivate renewable energy. Such an agreement would have to take into account two considerations.

First, the non-inclusion of the terms “energy” or “renewable energy” in any WTO agreement makes it hard for WTO rules to fully acknowledge and value the specific obstacles faced by renewable energy producers and consumers. It is necessary to weigh the positive externalities of renewable energy use against the negative ones created by fossil fuels when evaluating national policies, and the WTO still lacks a suitable mechanism to achieve this goal.

Second, the need to condemn local content requirements should be balanced with the necessity, for developing and emerging economies, of developing and improving their own domestic renewable energy industry. A subsidy program completely void of a local content requirement would hardly help the country develop its own domestic production and market. One possible solution could be to include a period of transition, provided for in the Protocol of Accession, where the local content requirements are accepted by the WTO until a certain level of development is reached.

Finally, there is another approach to modifying the SCM that may be easier politically. As discussed above, SCM Article 8 formerly allowed nonactionable subsidies regardless of their effects on other member states,<sup>146</sup> which represented a narrowly tailored exception to the SCM discipline and covered certain assistance to research activities, disadvantaged regions, and the promotion of the adaptation of existing facilities to new environmental requirements.<sup>147</sup> This provision could have been used to allow renewable energy subsidies but it expired in 2000.<sup>148</sup> The WTO's Committee on Subsidies and Countervailing Measures could agree to revive the nonactionable subsidies. The Committee consists of all the members of the WTO<sup>149</sup> and may therefore be an unwieldy forum for negotiation. However, SCM Article 8 provides pre-negotiated environmental text, which may ease its passage.

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145. See, e.g., *Collapse of Doha Round of Global Talks Disappointing, Says Ban*, UN NEWS CENTRE (July 30, 2008), <http://www.un.org/apps/news/story.asp?NewsID=27534#.VfE75xFVhBd>.

146. SCM, *supra* note 4, at art. 8.

147. *Id.*

148. *Id.*

149. *Id.*

## IV. CONCLUSION

Renewable subsidies are crucial for combating climate change. Yet the relevant WTO law developed in an era of privatization, when subsidies were considered bad economic policy.<sup>150</sup> This article has proposed three methods that would allow WTO panels and the Appellate Body to interpret existing WTO law to regulate renewable subsidies more effectively. A new WTO agreement for renewable subsidies is a fourth possibility. But which of these approaches is most likely to be effective?

Applying the AoA to renewable subsidies is an insufficient solution, because the agreement applies only to a small subset of renewable subsidies for products related to Chapters 1 to 24 of the Harmonized System. This is helpful for ethanol subsidies but little else. Interpreting the SCM's definition of subsidies to exclude some government support for renewable energy is a similarly limited solution. The approach may be effective for regulatory measures like FITs, which either do not provide a financial contribution or a benefit. But many other common means of supporting renewable energy—tax incentives, direct payments, low-interest credit, etc.—do provide financial contributions and benefits. Therefore, while useful, this approach cannot support a comprehensive renewable subsidies regime necessary to cultivate a renewable energy sector. Finally, negotiating a new agreement seems difficult, although an agreement to revive the nonactionable category of subsidies may be easier given that there is no new text to be negotiated.

Therefore, the best approach is for WTO panels and the Appellate Body to clarify the relationship between GATT and the SCM, such that the environmental exception in GATT Article XX applies to the SCM. This is a controversial proposition. Nevertheless, there are at least three potential legal arguments supporting such an application: the application of the *lex specialis* principle, the logical argument that less trade-distorting subsidies should be treated no more stringently than the more trade-distorting measures already governed by GATT Article XX, and the example set when the Appellate Body applied GATT Article XX to China's Protocol of Accession in *China—Publications and Audiovisual Products*. Besides these legal arguments, there is also a powerful policy argument in favor of applying GATT Article XX to the SCM: an effective WTO regime for renewable subsidies must balance legitimate trade and environmental concerns. Article XX was designed to achieve this balance for tariffs and other non-subsidy measures and therefore may be best suited to achieve this balance for subsidies.

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150. Goodman & Loveman, *supra* note 6.