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AMENDING WTO RULES TO ALLEVIATE CONSTRAINTS ON RENEWABLE ENERGY SUBSIDIES

RICK A. WALTMAN

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I. INTRODUCTION

The global community widely recognizes the danger that greenhouse gas (GHG) induced climate change poses to the earth's

ecosystems and human health.¹ Because energy generation is currently responsible for sixty percent of worldwide GHG emissions, decreasing the emissions from energy generation will substantially contribute to future climate change mitigation efforts.² Renewable energy generation such as wind, solar, geothermal, or biomass results in zero, or close to zero, GHG emissions, so employment of renewable energy sources in place of conventional fossil fuel sources will be especially important for climate-conscious nations to consider in their future energy policies.³

To compete with fossil fuel resources, renewable sources will require subsidies of some sort. In 2013, the International Energy Agency estimated that the fossil fuel industry received \$548 billion in subsidies worldwide.⁴ The renewable energy industry received less than one quarter that amount.⁵ Regardless of this discrepancy in investment, clean energy subsidies have recently been subject to restriction pursuant to World Trade Organization (WTO) rules.

Multiple agreements under the WTO impose constraints on national investments in domestic industry. Rules under the General Agreement on Tariffs and Trade (GATT), the Agreement on Subsidies and Countervailing Measures (SCM Agreement), and the Agreement on Trade Related Investment Measures (TRIMs) are already being used to restrict adoption of renewable energy subsidies that affect foreign

1. CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY 7-22 (Martin Parry et al. eds., 2007), http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4_wg2_full_report.pdf; see also United Nations Conference on Environment and Development: Framework Convention on Climate Change, Preamble (June 4, 1992) [hereinafter UNFCCC] (stating that the deleterious effects of climate change are a "common concern of human kind" and warning that increasing atmospheric GHG concentrations "may adversely affect natural ecosystems and humankind."). According to the Intergovernmental Panel on Climate Change (IPCC), that "global average surface temperature has risen," is mostly "attributable to human activities" over the last 50 years. The IPCC—along with the national science academies of all industrialized nations—anticipates that this warming will result in extreme weather and potential danger to ecosystems and human health. Further, the IPCC expects that climate change will result in sea-level rise that will destroy property, increase draughts, increase outbreaks of disease, and endanger lives. See also Joint Science Academies Statement, Global Response to Climate Change (2005), nationalacademies.org/onpi/06072005.pdf.

2. See, e.g., *Renewable Energy Standards—Mitigating Global Warming*, UNION OF CONCERNED SCIENTISTS, www.ucsusa.org/clean_energy/smart-energy-solutions/increase-renewables/renewable-energy.html#.VU0yJ_IViko (last visited April 30, 2015).

3. *Renewable Energy: The Solution to Climate Change*, EREC (2010), http://www.seai.ie/Publications/Renewables_Publications_/Energy_RD_D/RESolutiontoclimatechange.pdf.

4. *World Energy Outlook--Energy Subsidies*, International Energy Agency (IEA) (2013), www.worldenergyoutlook.org/resources/energysubsidies/.

5. *Id.* Renewable energy subsidies amounted to less than 10% of fossil fuels subsidies in the United States during 2013. Lauren Stanford, *Fossil Fuel and Renewable Energy Subsidies*, CLEAN ENERGY ACTION (2013), cleanenergyaction.org/2013/07/26/fossil-fuel-and-renewable-energy-subsidies/.

industries.⁶ Application of these three agreements is consistent with the WTO's focus on "trade liberalization" as a primary concern.⁷ Accordingly, recent disagreements pursuant to the GATT, SCM Agreement, and TRIMs Agreement involve subsidy programs that favor domestic renewable energy industries, whether such favor is explicitly called for by law or incidental to subsidy programs.⁸

Renewable energy policies focused on equipment manufacture and product development often cater to domestic industry to maximize a nation's benefit in terms of infrastructure construction, employment, reliability, and energy pricing.⁹ At least until renewable energy is more widely adopted and competitive with the extensively subsidized fossil fuel industry, "trade liberalization" should not be an overriding factor for determining which subsidy programs are allowable.¹⁰ This article analyzes the most pertinent limitations that the WTO rules impose on renewable energy subsidies, and offers suggestions for amendments to WTO rules that might reduce some of these limitations.

Section II of this article provides an outline of major provisions from the GATT, SCM Agreement, and TRIMs Agreement. Section II first discusses the complaints against renewable energy subsidies under these WTO rules. The section then proceeds to assess the applicability of the most likely defenses that might apply to renewable energy subsidies, and concludes that these defenses are untenable. The final section offers suggestions for amending the GATT, SCM Agreement, and TRIMs Agreement to better facilitate renewable energy development. These suggestions are meant to serve merely as a starting point for discussion of some constraints the agreements impose, not as final or exhaustive fixes.

6. See *infra* Section III for a discussion of specific disputes that raise complaints under the GATT, the SCM Agreement, and the TRIMs Agreement.

7. Although the Agreement Establishing the World Trade Organization references "sustainable development" and endeavors that "protect and preserve the environment," the substantive terms of most WTO agreements and the resulting WTO Panel application largely ignore these concerns whenever they conflict with "trade liberalization." See *infra* Sections II and III for further discussion.

8. See *infra* Section III.

9. Arunabha Ghosh, *Governing Clean Energy Subsidies: Why Legal and Policy Clarity is Needed*, ICTSD (Nov. 9, 2011), www.ictsd.org/bridges-news/biores/news/governing-clean-energy-subsidies-why-legal-and-policy-clarity-is-needed (noting the many concerns other than unfettered international trade liberalization that drive national energy policy).

10. The trade liberalization ideal is generally called in to question because of its inconsistency with common notions of capitalism, its effect of increasing global market prices, national sovereignty, and its incompatibility with non-trade concerns such as climate change, environmental preservation, and humanitarian concerns. *Id.* (discussing the need for domestic focus for third world countries to develop clean energy); see also *The WTO Has Failed as a Multilateral Agency in Promoting International Trade*, E-INTERNATIONAL RELATIONS (2014), www.e-ir.info/2014/04/29/the-wto-has-failed-as-a-multilateral-agency-in-promoting-international-trade/.

II. AN OVERVIEW OF RULES UNDER THREE WTO AGREEMENTS

On April 15, 1994, 123 signatory countries established the World Trade Organization (WTO) to establish rules of administration to develop and maintain an open multilateral international trading system.¹¹ The WTO provides mechanisms both for negotiating trade agreements and for resolving disputes between countries that are members to such agreements.¹² Many characteristics of today's WTO system originate from previous trade negotiations, including the original 1947 General Agreement on Tariffs and Trade (GATT), which is still in effect under the WTO framework.¹³

In conjunction with the GATT, several other agreements on specific trade-related issues govern allowable Member state behavior.¹⁴ Both the Agreement on Trade-Related Investment Measures (TRIMs)¹⁵ and the Agreement on Subsidies and Countervailing Measures (SCM)¹⁶ provide additional legal standards aimed at minimizing barriers to free trade.

When conflicts arise under a WTO agreement, parties can initiate settlement negotiations under the Dispute Settlement Agreement.¹⁷ A conflict between Member states might be settled through consultations,

11. Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 194, http://www.wto.org/english/docs_e/legal_e/legal_e.htm; *The GATT Years: from Havana to Marrakesh*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact4_e.htm (last visited April 6, 2015).

12. *The GATT Years: from Havana to Marrakesh*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact4_e.htm (last visited April 6, 2015). WTO agreements are signed by representatives of signatory governments, and ratified by their legislatures. *Understanding the WTO*, WORLD TRADE ORGANIZATION (2015), https://www.wto.org/english/thewto_e/whatis_e/tif_e/understanding_e.pdf.

13. General Agreement on Tariffs and Trade, Oct. 30, 1947 http://www.wto.org/english/docs_e/legal_e/legal_e.htm. The 1947 agreement is still in effect, subject to the 1994 amendments. General Agreement on Tariffs and Trade 1994 [hereinafter GATT], https://www.wto.org/english/docs_e/legal_e/06-gatt_e.htm.

14. For example, the Agreement on Agriculture (providing for GATT exceptions for domestic support, market access, and export subsidies), the General Agreement on Trade Services (extending WTO principles to services), the Agreement on Trade-Related Aspects of Intellectual Property Rights (setting standards for intellectual property regulation), the Agreement on the Application of Sanitary and Phytosanitary Measures (pertaining to food safety and the health of people, animals, and plants), the Agreement on Technical Barriers to Trade (ensuring standards surrounding technical negotiations and certification procedures do not "create unnecessary obstacles to trade"), the Agreement on Customs Valuation (adopting uniform methods for customs valuation), and many others. *The WTO Agreements*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/thewto_e/whatis_e/inbrief_e/inbr03_e.htm (last visited on April 6, 2015).

15. Agreement on Trade-Related Investment Measures, Apr. 15, 1994, [hereinafter TRIMs Agreement], http://www.wto.org/english/docs_e/legal_e/18-trims.pdf.

16. Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, [hereinafter SCM], http://www.wto.org/english/docs_e/legal_e/24-scm.pdf.

17. David Palmeter, *The WTO as a Legal System*, 24 FORD INT'L L. J. 444 (2000), <http://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1744&context=ilj>.

but a WTO Panel will preside over the matter if a consultation fails.¹⁸ If the WTO determines that a Member's action violates the GATT, SCM, TRIMs, or another agreement, the WTO can demand compliance, impose countervailing duties, or allow the prevailing Member party to impose sanctions.¹⁹

A. *The General Agreement on Tariffs and Trade*

The GATT proscribes guiding principles—such as “most-favored nation”²⁰ and “national” treatment²¹—to minimize discriminatory impediments to free trade.²² Article I of the GATT requires Member states to offer any favorable treatment that they give to products flowing to or from one country to “like products” flowing to or from all other member countries.²³ Members must treat all other GATT Members' export markets equally. Article III requires Member states to treat imports from other member nations similarly to all “like” domestic goods.²⁴ The Article applies to all policy measures, including tariffs, that affect imports or exports. The TRIMs agreement incorporates GATT Article III, and is discussed further below in Section II.C. of this article. Generally, any tariffs offered to one Member must extend to all GATT members, but the GATT does offer multiple exceptions.²⁵

Article XX of the GATT provides ten exceptions to its rules, including immunity for actions aimed at protection of both natural resources and human health.²⁶ All Article XX exceptions are limited in application and are subject to the core GATT principles expressed in the Article XX chapeau—measures cannot amount to a (1) “means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail,” (2) “or a disguised restriction on international trade.”²⁷ Two of these exceptions under Articles XX (b) and (g), along with the chapeau limitation, are discussed further and applied below in

18. Understanding on Rules and Procedures Governing the Settlement of Disputes, Arts. 4, 5, Apr. 15, 1994, [hereinafter DSU], http://www.wto.org/english/docs_e/legal_e/28-dsu.pdf. Panel decision may be appealed to the WTO appellate body. *Id.*

19. *Id.* at Arts. 21, 22.

20. GATT, *supra* note 13, Art. I.

21. *Id.*, at Art. III.

22. *Id.* at Preamble (According to its preamble, its purpose is the “substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis.”).

23. *Id.* at Art. I(1). The “national treatment” principle means that internal taxes and regulations cannot be used as substitutes for tariffs by discriminating against imported goods.

24. *Id.* at Art. III(4). Any advantage or benefit applicable to domestic goods must also be offered to imports. Some exceptions apply to developing countries under certain conditions; *see also Id.* at Art. I(2).

25. *See, e.g.*, GATT, *supra* note 13, at Arts. III, XIV, XX, and XXI.

26. *Id.* at Arts. XX(g) and XX(b), respectively.

27. GATT, *supra* note 13, at Art. XX.

Section III.B. of this article. The GATT Article XX exceptions do not apply to claims under the SCM Agreement, but they do apply to the TRIMs Agreement.

B. The Agreement on Subsidies and Countervailing Measures

All WTO Member countries are signatories to the Agreement on Subsidies and Countervailing Measures (SCM). The SCM Agreement sanctions certain subsidies from governments, public bodies, and private bodies instructed to contribute by the government.²⁸ The definition of “subsidies” under the SCM Agreement—distinguishable from subsidies in the colloquial sense used throughout this article—includes financial contributions²⁹ and any measures that result in a trade advantage to a Member by either increasing exports or reducing imports of products.³⁰ If a subsidy program is “specific,”³¹ it may be per se “prohibited” or merely “actionable” in context of certain applications.³²

The SCM Agreement focuses on subsidies if they “confer a benefit”³³ to certain industries or enterprises.³⁴ A Member State’s subsidy is deemed “specific” if the Member’s granting authority “explicitly limits access” to certain industries or enterprises,³⁵ or if the subsidy is “limited to certain enterprises located within a designated geographic region.”³⁶

28. SCM, *supra* note 16, at Art. 1.1(a)(1).

29. For example, grants, loans, guarantees, foregone revenues (e.g. tax credits), and price support *Id.* at Art. 1.1(a)(1)(i)–(iii) (discussing transfers, tax credits, guarantees, etc.).

30. *Id.* at Art. 1.1(a)(2) (A subsidy also exists if “there is any form of income or price support in the sense of Article XVI of GATT 1994.”).

31. *Id.*, at Art. 2.

32. “A subsidy as defined in paragraph 1 shall be subject to the provisions of Part II or shall be subject to the provisions of Part III or V only if such a subsidy is specific in accordance with the provisions of Article 2.” *Id.* at Art. 1.2. Part II of the SCM contains provisions concerning “prohibited subsidies;” Part III discusses “actionable” subsidies;” and Part V outlines “countervailing measures” that other Members might take against a violating Member. Note that all prohibited subsidies are by definition specific subsidies. *Id.*, at Art. 2.3 (“Any subsidy falling under the provisions of Article 3 (prohibited subsidies) shall be deemed to be specific.”). Although the SCM Agreement generally discourages subsidies, it does permit some subsidies to develop and persist. Subsidies used for higher education or research purposes, for instance, are deemed “non-actionable” under Part IV. *Id.* at Arts. 8.1, 8.2(a).

33. “Providing a financial contribution that is generally unavailable in the marketplace constitutes a benefit.” Deepa Badrinarayana, *Trading Up Kyoto: A Proposal to Amend the Protocol, Part I*, 41 B.C. ENV’T L. AFF. L. REV. 1, 28 (2014), lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=2123&context=ealr; LUCA RUBINI, THE DEFINITION OF SUBSIDY AND STATE AID: WTO AND EC LAW IN COMPARATIVE PERSPECTIVE 108–09 (2010) (“The Appellate Body has promptly underlined that the ‘financial contribution’ is separate from the ‘benefit’ and that these two elements together determine whether a subsidy exists.”).

34. SCM, *supra* note 16, at Arts. 1.1(b), 1.2, 2.1.

35. *Id.* at Art. 2.1(a).

36. *Id.* at Art. 2.2 (further, specificity might exist if, after evaluating the “extent of diversification economic activities” and the duration of the subsidy’s operation, the subsidy program is used by a limited number of enterprises, the program is predominantly used by certain enterprises, the subsidies are disproportionately granted to certain enterprises, and/or

Any specificity determination must be “clearly substantiated on the basis of positive evidence.”³⁷

Two types of specific subsidies are outright prohibited by the SCM Agreement: those that are contingent “upon export performance,” whether by explicit legal standard or in effect; and those that require “the use of domestic over imported goods.”³⁸ According to Article II of the SCM Agreement, Member countries cannot grant or continue subsidy programs of either sort. Section III of this article discusses quarrels over renewable energy subsidies that involve analysis of the SCM prohibited subsidy provisions.

Different types of subsidies, those that are not categorically prohibited, necessitate different degrees of restriction under the SCM Agreement. The SCM Agreement characterizes domestic subsidies as “actionable” if they result in “adverse effects to the interests of other Members.”³⁹ Such “adverse effects” exist if the subsidies injure the domestic industry of other WTO Members, abrogate or diminish benefits conferred by GATT, or result in “serious prejudice to [other nations’] interests.”⁴⁰ In order to determine whether a subsidy causes injury, the following factors are considered together: (i) the trade effects of the subsidy, (ii) significant increase of subsidized imports, (iii) an imminent, substantial increase in exports to complainant’s domestic market, (iv) “significant depressing or suppressing effect on domestic prices” that will increase demand for imported goods, and (v) product inventories.⁴¹

A subsidy results in “serious prejudice” if it: (a) “displace[s] or impede[s] the exports of a like product of another Member into the market of the subsidizing Member,” (b) “displaces or [impedes] the exports of a like product of another Member from a third country market,” (c) results in significant undercuts of price and competition for like domestic products in the same market, or (d) increases the worldwide market share of the subsidizing Member’s product or commodity to a level exceeding its average share over the preceding three years.⁴² To limit abuse of the SCM “actionable” provisions, the SCM Agreement precludes a finding of “serious prejudice” where trade imbalances might result from voluntary or specified involuntary actions

the “manner in which discretion has been exercised” with respect to a subsidy program indicates that the program is specific. Under Article 2.1(c), these factors are used in context to determine whether “there are reasons to believe that the subsidy may in fact be specific”).

37. *Id.* at Art. 2.4.

38. *Id.* at Art. 3.1(a)–(b).

39. *Id.* at Art. 5.

40. *Id.* at Art. 5(a)–(c).

41. *Id.* at Art. 15.7.

42. *Id.* Art. 6.3.

made by the complaining Member.⁴³

If a complaining Member country defeats a subsidizing Member country in an "actionable" subsidy claim, then the subsidizing Member must eliminate the adverse effect—even if that means eliminating the entire subsidy program—or else risk being subject to countervailing measures.⁴⁴ For example, the United States International Trade Commission (ITC) imposed tariffs on China's solar producers pursuant to the "actionable subsidy" provisions of the SCM Agreement.⁴⁵ This dispute is discussed below in Section III.A.1.

C. *The Agreement on Trade-Related Investment Measures*

Countries often utilize government investments to favor domestic industries by conditioning investments on certain requirements or quotas for foreign direct investments (FDIs). For instance, subsidies might be conditional on a businesses using domestic inputs for production, or FDIs might be used to favor certain industries.⁴⁶ However, measures that are geared toward such national protectionism conflict with the WTO goal of reducing and/or removing restrictions on free trade between nations.⁴⁷ In conjunction with the GATT and the SCM Agreement, the TRIMs Agreement restricts some protectionist investment measures.

Article 2 of the TRIMs Agreement requires WTO Members to

43. SCM Agreement, Art. 6.7 specifically reads:

Displacement or impediment resulting in serious prejudice shall not arise under paragraph 3 where any of the following circumstances exist during the relevant period: (a) prohibition or restriction on exports of the like product from the complaining Member or on imports from the complaining Member into the third country market concerned; (b) decision by an importing government operating a monopoly of trade or state trading in the product concerned to shift, for non-commercial reasons, imports from the complaining Member to another country or countries; (c) natural disasters, strikes, transport disruptions or other force majeure substantially affecting production, qualities, quantities or prices of the product available for export from the complaining Member; (d) existence of arrangements limiting exports from the complaining Member; (e) voluntary decrease in the availability for export of the product concerned from the complaining Member (including, inter alia, a situation where firms in the complaining Member have been autonomously reallocating exports of this product to new markets); (f) failure to conform to standards and other regulatory requirements in the importing country.

44. *Id.* at Art. 7, 7.9 (SCM Part V, Arts. 10-23, contains provisions concerning the process for imposing countervailing measures. The Agreement requires that a countervailing measure be terminated after five years unless it is determined that continuation of the measure is necessary to avoid the continuation or recurrence of subsidization and injury.).

45. *See infra*, Section III.A.1.

46. *See* Robert H. Edwards, Jr. & Simon N. Lester, *Towards a More Comprehensive World Trade Organization Agreement on Trade Related Investment Measures*, 33 STAN. J. INT'L L. 169, 176-86 (1997) (assessing the constraints that countries often place on investments).

47. GATT 1994, *supra* note 13, at Preamble.

comply with GATT Articles III and XI.⁴⁸ The Annex to the TRIMs Agreement illustrates scenarios that violate Article 2.⁴⁹ GATT Article III violations include domestically enforceable laws that condition the availability of a financial advantage on domestic content use.⁵⁰ GATT Article XI prohibits quantitative restrictions on importers.⁵¹ That is, under both the GATT and TRIMs Agreements, Members cannot require businesses to procure certain amounts of products or services from domestic sources; these requirements would constitute a per se violation of the GATT “national treatment” provision. TRIMs Article 3 restrictions largely overlap with the SCM Agreement’s “prohibited” subsidies.⁵² However, Article 3 of the TRIMs Agreement explicitly stipulates that the GATT Article XX exceptions⁵³ apply to TRIMs.⁵⁴

The following Section addresses specific applications of the GATT, SCM Agreement, and TRIMs Agreement to disputes amongst Member nations involving renewable energy subsidies specifically. It then discusses the potential applicability of GATT Article XX exceptions to renewable energy subsidies.

III. THE WTO RULES APPLIED

To assess the viability of renewable energy subsidies under the WTO rules, one must consider the constraints already being imposed by the Agreements. Exceptions that might apply to renewable energy subsidies may alleviate some of these constraints, but their availability is questionable.

A. *WTO Disputes Over Renewable Energy Subsidies*

The complaints against China, Canada, India, and the EU highlight some of the issues for renewable energy that the GATT, SCM Agreement, and TRIMs Agreement rules present.

48. TRIMs Agreement, *supra* note 15, at Art. 2.1; GATT, *supra* note 13, at Art. III, XI.

49. TRIMs Agreement, *supra* note 15, at Annex.

50. *Id.* at Annex, ¶ 1 (stating that domestic laws requiring “the purchase or use by an enterprise of products of domestic origin or from any domestic source, whether specified in terms of particular products, in terms of volume or value of products, or in terms of a proportion of volume or value of its local production” are inconsistent with Art. III of GATT 1994).

51. *Id.* at Annex, ¶ 2.

52. *See* SCM, *supra* note 16, at Art. 3.1(b).

53. *See, e.g.*, GATT, *supra* note 13, at Art. XX.

54. *See* TRIMS, *supra* note 15, at Art. 3 (whereas the exceptions do not apply to subsidies under the SCM Agreement).

1. *SCM Agreement based challenges to China's solar and wind subsidies*

In September 2010, the American Federation of Labor and Congress of Industrial Organization (AFL-CIO) filed a petition with the U.S. Trade Representative (USTR) against China for its renewable energy subsidies.⁵⁵ The AFL-CIO alleged that China provided its domestic wind and solar manufacturers with a financial benefit contingent on use of domestic suppliers or export performance, and thereby violated the SCM Agreement's prohibited subsidy provisions.⁵⁶ Specifically, the petition asserted that China discriminated against foreign wind and solar equipment manufacturers by conditioning permits for domestic producers on the use of locally manufactured equipment.⁵⁷ Additionally, the petitioners complained that attempts to conform to the Kyoto Protocol's clean development provisions violated GATT Article III's "national treatment" standard by requiring foreign producers to collaborate with local enterprises for research and development, compelling the use of local suppliers, and fixing the prices of mineral inputs.⁵⁸

During its investigation, the USTR determined that China violated the SCM Agreement by implementing its subsidy program.⁵⁹ The United States then submitted the matter to the WTO for settlement dispute consultation.⁶⁰ Similar to the AFL-CIO petition, the United States complaint, joined by the European Union (EU) and Japan, took issue with the Chinese funding program's contingencies on use of domestic content.⁶¹ China removed some of its subsidies pursuant to a settlement reached during the consultations.⁶² However, some Chinese funding for its domestic solar panels persists. The United States is currently

55. Petition for Relief Under Section 301 of the Trade Act of 1974, as Amended: China's Policies Affecting Trade and Investment in Green Technology, Sept. 9, 2010, <https://ustr.gov/sites/default/files/09-09-2010%20Petition.pdf> (petitioners alleged that China's "Ride the Wind" Program provided a low interest loans to exporters based on export performance, and gave favorable tax treatment to foreign joint ventures).

56. *Id.* at 104–14.

57. *Id.*

58. *Id.* at 91–104; GATT, *supra* note 13, at Art. III, ¶ 4.

59. *United States Requests WTO Dispute Settlement Consultations on China's Subsidies for Wind Power Equipment Manufacturers*, USTR (Dec. 2010), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2010/december/united-states-requests-wto-dispute-settlement-con>.

60. Request to Join Consultations by the European Union, China—Measures Concerning Wind Power Equipment, WT/DS419/2 (Jan. 14, 2011); Request to Join Consultations by Japan, China—Measures Concerning Wind Power Equipment, WT/DS419/3 (Jan. 19, 2011).

61. *Id.*

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

imposing countervailing measures against these subsidies pursuant to the “actionable” subsidies provisions of the SCM Agreement.⁶³

To determine whether China’s removed and remaining solar subsidies actually violate the SCM Agreement, one must determine whether the measures are subsidies that “confer a benefit,”⁶⁴ whether they are prohibited under Article 3 of the SCM Agreement, and/or whether they result in “adverse effects to the interests of other Members” as specified in Articles 5, 6, and 15.⁶⁵

There is little doubt that China’s removed subsidies were “prohibited” under Article 3—they consisted of direct financial benefits that were contingent on the use of domestic products. Even China itself did not contest that these subsidies fit within the Article 3 “prohibited subsidies” provision.⁶⁶ In its decision to subject the remaining Chinese solar equipment to tariffs, the United States ITC determined on its own that China’s measures injured the United States’ solar market⁶⁷ and thus violated the “actionable” subsidies provisions of the SCM Agreement.⁶⁸ Unless China challenges the United States sanctions, the WTO will not make any formal factual or legal determinations to clarify whether the U.S. ITC determinations were justified. Although the full details of determining whether “adverse effects” exist under the “actionable” subsidies provisions are still largely unexplored, the fact that China has not yet formally challenged the United States’ countervailing measures illustrates the tangible implications for nations’ roles in developing their own renewable energy industries.⁶⁹

One recent WTO dispute against Canada’s province of Ontario offers a more definitive application of the SCM Agreement’s terms to a

63. Diane Cardwell, *U.S. Imposes Steep Tariffs on Chinese Solar Panels*, N.Y. TIMES (Dec. 16, 2014), www.nytimes.com/2014/12/17/business/energy-environment/-us-imposes-steep-tariffs-on-chinese-solar-panels.html; Keith Bradsher, *China Criticizes Steep U.S. Tariffs on Solar Panels*, N.Y. TIMES (Dec. 17, 2014), www.nytimes.com/2014/12/18/business/energy-environment/china-criticizes-steep-us-tariffs-on-solar-panels.html.

64. See *supra* notes 32 and 33 and accompanying text.

65. See *supra* notes 47–50 and accompanying text.

66. For the removed subsidies, this is no real question. “The fact that China agreed to withdraw the subsidy indicates that the United States’ prohibited subsidies claim might have been tenable.” Badrinarayana, *supra* note 33, at 37.

67. Although the ITC did not formally determine whether the subsidies “confer a benefit,” it did refer to allegations that China made financial contributions to its industries that conferred a benefit. “The Chinese government uses cash grants, raw-materials discounts, preferential loans, tax incentives and currency manipulation to boost exports of solar cells.” *China Rejects U.S. Trade Ruling That Solar Imports Harm Industry*, BLOOMBERG NEWS (Dec. 5, 2011), www.bloomberg.com/news/articles/2011-12-04/china-rejects-u-s-trade-panel-s-ruling-that-solar-imports-harm-industry.

68. Bradsher, *supra* note 63.

69. “China’s Commerce Ministry strongly criticized on Wednesday afternoon the United States’ decision to impose broader antidumping and antisubsidy tariffs on solar panels from China, but stopped short of threatening specific retaliation.” Bradsher, *supra* note 63.

renewable energy program. This dispute also included holdings on relevant GATT and TRIMs Agreement provisions.

2. *Canada's "made in Ontario" and export contingencies*

Ontario's Green Energy and Green Economy Act of 2009 (OGEA) resulted in the first WTO ruling ever issued against an energy subsidy program.⁷⁰ In 2011, the Ontario law drew challenges from both the EU and Japan. The WTO then merged the disputes to decide the common issues regarding the GATT, TRIMs Agreement, and SCM Agreement violations.⁷¹

Ontario's law utilized a feed-in-tariff⁷² (FIT) to incentivize the development, production, and use of renewable energy.⁷³ The program guaranteed renewable electricity producers profitable power purchase agreements, access to distribution, and stability through long-term contracts. The OGEA offered FIT benefits to power producers, but made such benefits dependent upon obtaining certain amounts of equipment locally.⁷⁴ The law commanded the Ontario Power Authority⁷⁵ to implement FITs in accordance with the Ministry of Energy Infrastructure's domestic content requirements.⁷⁶

70. Green Energy and Green Economy Act of 2009 [hereinafter OGEA], <http://perma.cc/MCJ9-96D8> (the Act is informally referred to simply as the "Green Energy Act.").

71. Request for Consultations by Japan, Canada—Certain Measures Affecting the Renewable Energy Generation Sector, WT/DS412/1 (Sept. 16, 2010), [hereinafter Japan-Canada WTO Request]; Request for Consultations by the European Union, Canada—Measures Related to the Feed-In Tariff Program, WT/DS426/1 (Aug. 16, 2011), [hereinafter EU-Canada WTO Request].

72. A FIT is a governmental tool used to incentivize investment in renewable energy by offering financial incentives and long-term contracts to renewable energy producers. *See* T. COUTURE ET AL., U.S. DEPT. OF ENERGY, POLICYMAKER'S GUIDE TO FEED-IN TARIFF POLICY DESIGN ENERGY (2010).

73. OGEA, *supra* note 70, Part V, § 7(4) ("‘Feed-in tariff program’ means a program for procurement, including a procurement process, providing standard program rules, standard contracts and standard pricing regarding classes of generation facilities differentiated by energy source or fuel type, generator capacity and the manner by which the generation facility is used, deployed, installed or located.").

74. *Id.* In 2011, Requirements for domestic content ranged from 25% to 60%, depending on the type of renewable energy. Panel Report, Canada—Measures Relating to the Feed-In Tariff Program, WT/DS412/R, WT/DS426/R (Dec. 19, 2012) [hereinafter Canada-FIT Program], <http://goo.gl/xmUtaq> and <http://perma.cc/RAR6-2JA9>.

75. The Ontario Power Authority is an independent, non-profit corporation established through the Electricity Restructuring Act, 2004. The Authority is responsible for making long term projections for power supply and demand. *About the Independent Electricity System Operator*, IESO, www.powerauthority.on.ca/about-us (last visited April 19, 2015) ("On January 1, 2015, the Ontario Power Authority (OPA) merged with the Independent Electricity System Operator (IESO) to create a new organization that will combine the OPA and IESO mandates and continue the high quality work both organizations are known.").

76. OGEA, *supra* note 70, Part V § 7(3) ("the Minister shall issue, and the OPA shall follow in preparing its feed-in tariff program, directions that set out the goals relating to domestic content to be achieved during the period to be covered by the program.").

Both the EU and Japan alleged in their WTO complaints that the OGEA violated GATT's "most-favored nation" and "national treatment" provisions, the TRIMs Agreement, and the SCM Agreement.⁷⁷ The WTO Panel ruled on each of these issues.

The EU request for dispute settlement alleged that Ontario's FITs were inconsistent with Canada's obligations under Article III, paragraphs 1, 4, and 5 of the GATT. Specifically, the EU claimed that the OGEA's tariff provisions constituted laws that affected the "internal sale, offering for sale, purchase, transportation, distribution, or use"⁷⁸ renewable energy equipment for electric generating units (EGUs), resulted in "less favorable" treatment to imported equipment than to domestic "like" products,⁷⁹ and required that certain proportions of equipment for renewable energy EGUs be purchased from Ontario sources—thus, it "afforded protection to domestic production" contrary to Canada's GATT obligations.⁸⁰ Canada claimed that Ontario's law was exempted from GATT Article III under the exceptions laid out in, *inter alia*, Article III, Section 8, because it purchased the power for "governmental purposes."⁸¹

The WTO Panel agreed with the EU and Japan that Ontario's OGEA tariffs violated Article III, Section 4 of the GATT. The Panel noted that Ontario's tariffs then also fell within the scope of paragraph 1(a) of the TRIMs Agreement Annex (Illustrative List) because they required renewable producers to use a certain proportion of "products of domestic origin" in order to "obtain an advantage" conferred by the Act.⁸² Because the tariff program violated GATT Article III's "national treatment" requirements,⁸³ it also amounted to a violation of Article 2 of

77. Japan-Canada WTO Request, *supra* note 71; EU-Canada WTO Request, *supra* note 71.

78. See GATT 1994, *supra* note 13, Article III, § 1 (describing what Member measures are subject to the national treatment provisions).

79. "Products of . . . any contracting party imported in to the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin. . . ." *Id.* at Art. III, Sect. 4.

80. The measures subject to Part II of GATT "should not be applied to imported or domestic products so as to afford protection to domestic production" *Id.* Art. III, §1.

81. Pertaining to "regulations or requirements governing the procurement by governmental agencies of products purchased for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods for commercial sale." *Id.* Art. III, § 8. Canada did not raise the "exhaustible natural resources" or human health defenses under Art. XX of GATT 1994. Canada—Certain Measures Affecting the Renewable Energy Generation Sector (DS412), World Trade Organization Panel, May 10, 2012 [hereinafter Canada WTO Brief], available at <http://perma.cc/7X8R-KXQ6>.

82. TRIMs, *supra* note 15, ANNEX, 1(a).

83. *Id.* ("TRIMs that are inconsistent with the obligation of national treatment provided for in paragraph 4 of Article III of GATT 1994.")

the TRIMs Agreement.⁸⁴ Moreover, the Panel found that Canada failed to show that Ontario's law was entitled to the GATT Article III "governmental purposes" exception because the FIT program operated "with a view to commercial resale."⁸⁵

Regarding the SCM Agreement claims, the WTO Panel rejected the EU and Japanese charges that Ontario's tariffs amounted to a "prohibited subsidy" under Article 3.⁸⁶ The EU and Japan specifically alleged that the tariff appeared to be a "subsidy," as defined by the SCM Agreement, because it involved a financial contribution that would result in a price benefit for the domestic renewables industry. Because the tariff benefits were "contingent . . . upon the use of domestic over imported goods," the program should be prohibited by the SCM Agreement. The WTO Panel delivered a divided ruling, but the majority ultimately dismissed the SCM Agreement claims.

The Panel majority held that the complainants failed to establish that Ontario's tariffs amounted to a SCM Agreement "subsidy" because they did not show any "benefit"⁸⁷ that the tariff program conferred. The baseline that the EU used to compare domestic prices to import prices were based on markets that were "significantly influenced by government regulation."⁸⁸ Assessing Ontario's economy specifically, the Panel found that a competitive wholesale electricity market would not likely result in a reliable electric grid such as Ontario's. Because the competitive price was thus unclear, no "benefit" to Ontario companies was proven in this particular instance.⁸⁹ Without demonstrating any prices reflecting a competitive market, the EU failed to show that Ontario's market provided any benefit compared to said competitive market.⁹⁰ The Panel majority concluded that the challenger's subsidy arguments had no basis, and thus dismissed the SCM Agreement claims.⁹¹ One Panel member argued that the tariffs did "confer and

84. "Without prejudice to other rights and obligations under GATT 1994, no Member shall apply any TRIM that is inconsistent with the provisions of Article III or Article XI of GATT 1994." *Id.*

85. Canada-WTO Brief, *supra* note 81. (Canada did not raise a "natural resources" or human health defense under Article XX of GATT 1994.).

86. *Id.*.

87. *See* Art. 1.1(b) of the SCM, *supra* note 16.

88. *Id.* ¶7.274 (noting a prior dispute, *U.S.—Softwood Lumber IV*, where the WTO Appellate Body held that where a government played a "predominant" role in influencing sale prices for private transactions, that price could not be used as a basis for determining whether a benefit or "more than adequate compensation" was conferred).

89. *Id.* The Panel noted one approach it considered potentially useful for demonstrating the existence of a benefit in future tariff disputes. The Panel majority explained that challenging Members might have compared rates of return for Ontario versus those for projects with similar risk profiles in Canada as a whole.

90. *Id.*

91. *See supra* note 88 and accompanying parenthetical text.

benefit,” and were prohibited subsidies under the SCM Agreement. The lone panel member contended that the tariffs were beneficial enough to allow higher cost generators to persist in a market in which they would otherwise fail.⁹²

In future disputes regarding similar renewable energy tariff programs, a WTO Panel would almost certainly rule against the tariff-administering Member based on violations of the “national treatment” provisions of both the GATT and the TRIMs Agreement. Further, if the Panel is willing to look at more evidence pertaining to competitive prices to establish a benefit,⁹³ the tariff might be “prohibited” or “actionable” as a subsidy under the SCM Agreement. Currently pending WTO disputes over other renewable energy programs offer further reference points for how these WTO rules are affecting renewable energy development.⁹⁴

3. *Other recent complaints over renewable energy subsidies*

Greece, Italy, and the other EU countries recently adopted renewable energy FIT programs similar to Ontario’s OGEA in that they included domestic content requirements and export limits.⁹⁵ On November 5, 2012, China, joined by Japan, requested a WTO dispute consultation regarding these FIT measures, claiming that the FITs violate Articles I (most-favored nation) and III (national treatment) of the GATT, Article 2 (incorporated national treatment) of the TRIMs Agreement, and Article 3 (prohibited subsidies) of the SCM Agreement.⁹⁶ As of March 2016, the parties still have not reached an agreement.

The United States filed a similar request against India on February 6, 2013.⁹⁷ India’s Ministry of Renewable Energy and New Power sought

92. *Id.*, “[F]acilitating the entry of certain technologies into the market that does exist--such as it is--by way of a financial contribution can itself be considered to confer a benefit.”

93. See *supra* note 89 and accompanying text.

94. The Ontario Power Authority, for example, noted that its response to the WTO Panel decision would be to reduce and/or eliminate the domestic content requirements. Memorandum from the Minister of Energy to Colin Andersen, Chief Executive Officer, Ontario Power Authority (Aug. 16, 2013), <http://powerauthority.on.ca/sites/default/files/page/DirectionAdministrativeMatters-renewables-Aug16-2013.pdf> [hereinafter Ontario Power Authority Memorandum]; Ontario did indeed reduce its tariffs and eliminated its Ontario content requirement. Leah Stokes, *Ontario’s Backward Step on Renewable Energy*, THE STAR (July 22, 2013), www.thestar.com/opinion/commentary/2013/07/22/ontarios_backward_step_on_renewable_energy.html.

95. Request for Consultations by China, *European Union and Certain Member States—Certain Measures Concerning the Renewable Energy Generation Sector*, WT/DS452/1 (Nov. 7, 2012), https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds452_e.htm.

96. *Id.*

97. Request for Consultations by the United States, *India—Certain Measure Relating to Solar Cells and Solar Modules*, WT/DS456/1, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds456_e.htm.

to develop its domestic solar energy infrastructure by instituting a similar local requirement to Ontario's under the OGEA.⁹⁸ The United States argued that these measures violate the same GATT, SCM Agreement, and TRIMs Agreement provisions that are the subject of the *EU–Renewable Energy Dispute*.⁹⁹ A WTO Panel Report circulated on February 24, 2016 found that the tariffs violated both the GATT and the TRIMs agreement and that no GATT Article XX exceptions apply.¹⁰⁰

Further disputes between China, the United States, and the EU have been brought to the WTO to address free trade concerns for wind and solar equipment from China.¹⁰¹ The United States and the EU both raise concerns that China is artificially lowering the price of the equipment that it exports, thereby driving international prices down. The complaining Members seek to maintain the profits and market shares of their respective domestic wind and solar corporations.¹⁰²

B. GATT Article XX defenses

The *Canada–Feed in Tariffs* dispute, the Chinese renewable subsidy settlement, and the explicit language of the Agreements clearly show that the current WTO rules do not allow subsidies that directly favor domestic industry or otherwise violate the GATT and TRIMs Agreement “national treatment” principle. Although Canada never argued for a defense based on a natural resource, human health, or other environmental exception in the *Canada–Feed in Tariffs* dispute, Members facing GATT, SCM Agreement, and TRIMs Agreement violations for their renewable energy programs might attempt to do so in the future. This section discusses WTO treatment of relevant exceptions that might apply to challenges under the GATT, the TRIMs Agreement, and the SCM Agreement. Ultimately, no exceptions will prevail for export and domestic content requirements. However, the exceptions can be applied to subsidy measures that are entirely non-discriminatory in effect. If any discriminatory effect exists, even if unintentional, Article XX's application is less certain.

Likely the most useful defenses against WTO complaints for renewable energy programs are contained in the GATT exceptions under

98. *Id.* at 1–2.

99. *Id.*

100. *Id.*

101. See *Disputes by Country/Territory*, WORLD TRADE ORGANIZATION, https://www.wto.org/english/tratop_e/dispu_e/dispu_by_country_e.htm (last visited April 22, 2015).

102. See Ethan Bilby, *Exclusive: EU to Seek WTO Ruling Against Chinese Steel Duties*, REUTERS (June 11, 2013), www.reuters.com/article/2013/06/11/us-eu-china-wto-steel-idUSBRE95A09C20130611.

Article XX (b) and (g). The Article XX (b) and (g) exceptions apply to measures that are “necessary to protect human, animal or plant life or health” and those that are “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption,” respectively. WTO Member actions qualify for exemption under GATT Article XX (b) and (g) if: (1) the action fits within the subject matter and criteria of the exception; and (2) the measure conforms to the chapeau¹⁰³ of Article XX.¹⁰⁴

The following subsections discuss WTO disputes that illustrate these GATT Article XX exception requirements in turn. Principles derived from these WTO Panel decisions are then used to assess a likely outcome for common renewable energy subsidy programs.

1. *Subject matter and criteria of Article XX exceptions*

The *EC –Asbestos* and *U.S.–Gasoline* disputes highlight the prevailing issues for analyzing exceptions under GATT Articles XX (b) and XX (g), respectively. Neither Article XX exception is likely to apply under current WTO rules.

a. Article XX(b): An exception for protecting human, animal, and plant health.

Article XX(b) of the GATT allows WTO Members to use measures that are “necessary to protect human, animal or plant life or health.” This exception can likely extend to certain measures intended to mitigate climate change, which has been shown to present definitive risks to human, animal, and plant life. However, many common renewable energy subsidies, namely those that include domestic content or export requirements, are probably not necessary—even if they are, they will not protect a prohibited or actionable “subsidy” under the SCM Agreement.

To establish that a risk to human, animal, or plant life exists, a WTO panel may consider evidence provided by scientific experts and

103. “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, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures. . .” GATT, *supra* note 13, Art. XX.

104. See Panel Report, *United States–Restrictions on Imports of Tuna*, DS29/R, ¶ 5.12 (June 1994) [hereinafter *U.S.–Tuna*], https://www.wto.org/gatt_docs/English/SULPDF/91790155.pdf.

reports.¹⁰⁵ In the *EC–Asbestos* dispute, the WTO Appellate Body held that the lower Panel properly applied the Article XX(b) exception to France's trade embargos on asbestos products. The Panel based their ruling on scientific evidence from experts and reports that showed these asbestos products posed a threat to human health.¹⁰⁶

The scientific community almost¹⁰⁷ unanimously agrees that climate change presents a danger to human, animal, and plant life.¹⁰⁸ The Intergovernmental Panel on Climate Change (IPCC) projects CO₂ induced climate change to result in sea-level rise that will destroy property, increase draughts, increase outbreaks of disease, and endanger lives.¹⁰⁹ The United Nations Framework Convention on Climate Change (UNFCCC) has recognized the danger that increasing CO₂ concentrations pose to human well-being since 1992.¹¹⁰ Because renewable energy development will help reduce the CO₂ emissions that would otherwise occur, and thereby help mitigate the effects of climate change on human life, most renewable energy projects should certainly fall within the subject matter of the GATT Article XX (b) exception.¹¹¹ However, a

105. Appellate Body Report, *European Communities–Measures Affecting Asbestos and Asbestos-Containing Products*, ¶¶ 163–66, WT/DS135/AB/R (Mar. 12, 2001) [hereinafter *EC–Asbestos*], https://www.wto.org/english/tratop_e/dispu_e/135abr_e.pdf.
106. *Id.* ¶ 162.

107. “Less than 3% of climate scientists” claim that humans play only a minor role in global warming. See Dana Nuccitelli, *The Top Ten Global Warming ‘Skeptic’ Arguments Answered*, THE GUARDIAN (May 6, 2014), www.theguardian.com/environment/climate-consensus-97-per-cent/2014/may/06/top-ten-global-warming-skeptic-arguments-debunked. Many climate change deniers are funded by industries with a profit stake in preventing action on global warming, drawing many suspicions about the scientific integrity of their findings. See Douglas Fischer, “Dark Money” Funds Climate Change Denial Effort, SCIENTIFIC AMERICAN (Dec. 23, 2013), www.scientificamerican.com/article/dark-money-funds-climate-change-denial-effort/; Peter C. Frumhoff and Naomi Oreskes, *Fossil Fuel Firms are Still Bankrolling Climate Denial Lobby Groups*, THE GUARDIAN (March 25, 2015), www.theguardian.com/environment/2015/mar/25/fossil-fuel-firms-are-still-bankrolling-climate-denial-lobby-groups.

108. CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY 7–22 (Martin Parry et al. eds., 2007), https://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4_wg2_full_report.pdf; United Nations Conference on Environment and Development: Framework Convention on Climate Change, Preamble (June 4, 1992) [hereinafter UNFCCC] (stating that the deleterious effects of climate change are a “common concern of human kind” and warning that increasing atmospheric GHG concentrations “may adversely affect natural ecosystems and humankind.”). The IPCC findings—that “global average surface temperature has risen,” is mostly “attributable to human activities” over the last 50 years, and that this warming will result in extreme weather and potential danger to ecosystems and human health—are accepted by the national science academies of all industrialized nations. See Joint Science Academies Statement, Global Response to Climate Change (2005), nationalacademies.org/onpi/06072005.pdf.

109. See CONTRIBUTION OF WORKING GROUP II, *supra* note 107, at 7–22.

110. UNFCCC, *supra* note 107, Preamble.

111. See, e.g., *Clean Energy Standards*, CENTER FOR CLIMATE CHANGE AND ENERGY SOLUTIONS, <http://www.c2es.org/federal/policy-solutions/clean-energy-standards> (last visited April 20, 2015).

Member seeking to invoke this exception must also show that the measure is necessary to achieve the goal of climate change mitigation.

“Necessary” measures certainly must further their stated goal of protecting life. Measures under Article XX(b) are not “necessary” if any “alternative measures either consistent or less inconsistent” with GATT should not be available.¹¹² Notably, a Member must show more than a mere administrative burden to establish that an alternative is unavailable.¹¹³ The WTO Appellate Body in *EC–Asbestos* held that “[t]he more vital or important [the] common interests or values’ pursued [are], the easier it would be to accept as ‘necessary’ measures designed to achieve those ends.”¹¹⁴

Renewable energy subsidies undoubtedly help to mitigate climate change—and its affect on human, plant and animal life— by encouraging investment in emissionless or low emission energy production.¹¹⁵ Requirements for domestic content and export performance, however, are not likely “necessary.” Such requirements have previously been held to indicate a primary goal of market capture and/or domestic industry protection—such goals undermine the principle of trade liberalization under the WTO.¹¹⁶ Subsidies that utilize these requirements burden free trade more than they must, and are therefore not likely “necessary” according to the WTO. Presumably, other, less restricting means exist that can further the same goal of climate change mitigation. Members could offer subsidies without imposing domestic content or export performance requirements to qualify for this exception, provided they do not result in a serious injury to international trade.¹¹⁷

b. Article XX(g): An exception to conserve exhaustible natural resources

Article XX (g) of the GATT provides an exception for Members’

112. Panel Report, *United States–Standards for Reformulated and Conventional Gasoline*, WT/DS2/R, ¶ 6.20 (Jan. 29, 1996) [hereinafter *U.S.–Gasoline*], https://www.wto.org/english/tratop_e/dispu_e/dispu_e2-9.pdf; See also *EC–Asbestos*, WT/DS135/AB/R, *supra* note 105, at ¶¶ 163–66 (Mar. 12, 2001). WTO Appellate Body assessed the goal of protecting HAP life or health, and also noted that France could choose to regulate high risks but permit products that presented a low risk of cancer. *Id.* ¶¶ 164–168.

113. *U.S.–Gasoline*, *supra* note 112.

114. *EC–Asbestos*, *supra* note 105, ¶ 169, ¶ 172.

115. See Nancy Pfund & Ben Healey, *Should the Government Subsidize Alternative Energy?*, YALE SCHOOL OF MGMT. (Dec. 2011), <http://insights.som.yale.edu/insights/should-government-subsidize-alternative-energy>.

116. See, e.g., *Canada–FIT Program*, *supra* note 74, ¶¶ 7.7, 8.5, 8.9 (holding that a domestic use requirement was a form of WTO-inconsistent protection to certain energy producers).

117. See, e.g., Ontario Power Authority Memorandum (Aug. 16, 2013), *supra* note 94. The Energy Minister noted that Ontario will continue its Tariff program while drastically scaling back its domestic use requirement. No further challenges have come forward.

measures "relating to the conservation of exhaustible natural resources, if such measures are made in conjunction with restrictions on domestic production or consumption." To invoke this exception, a challenged Member must show that its measure: (1) aims to conserve exhaustible natural resources; (2) is related to the conservation goal; and (3) is made "even-handed" and "in conjunction with restrictions on domestic production or consumption."¹¹⁸

Assuming that renewable energy subsidies reduce GHG emissions and promote climate change mitigation,¹¹⁹ they almost certainly further the conservation of exhaustible natural resources. In the *U.S.–Gasoline* dispute, the WTO Panel held that U.S. Clean Air Act regulations pertaining to ozone emissions from gasoline were protected under the GATT Article XX (g) exception.¹²⁰ Specifically, the Panel ruled that clean air constitutes an exhaustible natural resource.¹²¹ Therefore, "a policy to reduce the depletion of clean air was a policy to conserve a natural resource within the meaning of Article XX (g)."¹²²

Measures that aim to reduce GHG emissions through renewable energy use, like the Clean Air Act regulations that aimed to reduce ozone emission, most likely constitute an aim to conserve the exhaustible natural resources of clean air and the atmosphere.¹²³ The stability of Earth's atmosphere depends on equilibrium compositions of its naturally occurring chemical species.¹²⁴ Surging anthropogenic GHG emissions, like ozone emissions, deplete clean air and the quality of the atmosphere, and thereby endanger the health of humans and the Earth's life-sustaining ecosystems.¹²⁵ The Earth's atmosphere, air quality, and other

118. GATT, *supra* note 13, Art. XX (g); *see also U.S.–Gasoline*, *supra* note 112 (1996).

119. *See supra* notes 106–110, and accompanying text.

120. *U.S. – Gasoline*, *supra* note 112.

121. *Id.* ¶¶ 2.1, 3.59 (agreeing with the U.S. argument that certain pollutants could deplete air quality over time). The Appellate Body reversed the Panel decision on separate grounds. *See* Appellate Body Report, *United States–Standards for Reformulated and Conventional Gasoline*, 29, WT/DS2/9 (April 29, 1996) [hereinafter *U.S.–Gasoline Appellate Report*], <http://perma.cc/DNB5-32HW>. The complainants did not appeal the finding of clean air as an exhaustible natural resource, so Appellate Body did not address the Panel's decision regarding this issue. *See id.* at 14–19.

122. *U.S.–Gasoline*, *supra* note 112, ¶ 4.4.

123. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION 7, 18–20 (Ottmar Edenhofer et al. eds., 2012) (discussing the environmental benefits of renewable energy, which includes climate change mitigation resulting from reduce GHG emissions).

124. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 37 (2007), https://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf.

125. *Id.* (discussing how the atmospheric concentration of constituent carbon dioxide and aerosols are the main causes of climate change, projecting future climate change due to increasing GHG emissions, and assessing the negative effects that are likely to result for human health and the ecosystem).

living¹²⁶ and non-living¹²⁷ natural resources threatened by increasing concentrations of GHGs and climate change all qualify as exhaustible natural resources under Article XX(g). Thus, renewable energy policies aimed at conserving any of these resources by reducing GHG emissions fall under the subject matter of Article XX (g).

To qualify for the Article XX(g) exception, measures aimed at conserving exhaustible natural resources must also “relate to” their conservation goal.¹²⁸ According to multiple WTO appellate decisions, GATT Article XX (g) requires that measures be “*primarily aimed at*” conservation, and the means be “reasonably related to the ends.”¹²⁹ For a Member to show that a measure is “primarily aimed at” conservation and “reasonably related to” its ends, there must be a “relationship between the general structure and design of the measure . . . and the policy goal . . . [of] conservation.”¹³⁰ If the Clean Air Act measures to reduce ozone emissions in *U.S.–Gasoline* were “reasonably related” to the goal of conserving air quality, then measures to reduce GHG emissions by way of renewable energy generation must also be “reasonably related” to the goal of conserving air quality, atmospheric equilibrium, and other natural resources. However, such measures must be narrowly implemented to serve the conservation goal. If a Member’s measure violates the GATT or TRIMs Agreement, and only part of the measure is necessary to serve the stated conservational goal, then the measure does not qualify for an Article XX (g) exemption. If a renewable energy subsidy is contingent upon export performance or domestic use, a WTO Panel will most likely perceive the measure as “primarily aimed at” protecting domestic industry and not at conserving natural resources.¹³¹ Because the conservation goal might be served

126. See Appellate Body Report, *United States–Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, ¶¶ 132–134 (Nov. 6, 1998) [hereinafter *U.S.–Shrimp*], https://www.wto.org/english/tratop_e/dispu_e/dispu_e58abr.pdf (ruling that endangered sea turtles were an exhaustible natural resource).

127. See *U.S.–Gasoline*, *supra* note 112 (holding that “lakes, streams, parks, crops, and forests,” were exhaustible natural resources contingent upon air quality, and thus measures to conserve air quality [also an exhaustible resource] also constituted means to conserve these natural resources under Article XX (g)).

128. GATT, *supra* note 13, Article XX (g).

129. *U.S.–Gasoline*, *supra* note 112, ¶ 6.39; *Canada–Measures Affecting Exports of Unprocessed Herring and Salmon*, GATT B.I.S.D., ¶ 4.4 (Mar. 22, 1988) [hereinafter *Canada–Herring and Salmon*]; *U.S.–Shrimp*, *supra* note 126, at ¶ 141.

130. *U.S.–Shrimp*, *supra* note 126, at ¶ 141.

131. See *Canada–FIT Program*, *supra* note 74. Although Canada did not assert an Article XX exemption, the WTO Panel affirmatively held that the domestic use requirement was sufficient to show a purpose off protecting domestic energy producers, as was inconsistent with WTO principles. *Id.*, ¶¶ 7.7, 8.5, 8.9; *Cf. U.S.–Shrimp*, *supra* note 125, ¶¶ 135–142 (finding that a measure regulating the harvesting of shrimp was narrow enough to “relate to” conservation of a natural resource, because the regulations extended *only* to the harvesting practices that threatened to deplete endangered turtles).

without export performance or domestic use requirements, such measures will be broader than necessary.¹³² Renewable energy subsidies that do not employ such requirements, however, might satisfy this requirement if they are implemented to specifically serve their conservation goals. These subsidy measures¹³³ still might fail under the last Article XX (g) exemption requirement.

Finally, a measure must be “even-handed.” That is, Article XX(g) requires “even-handedness in the imposition of restrictions, in the name of conservation, upon the production or consumption of exhaustible natural resources.”¹³⁴ Programs that treat domestic producers differently than foreign producers are not “even-handed.”¹³⁵

Although no WTO resolved dispute has addressed these standards in terms of domestic content and export contingent subsidies,¹³⁶ both export performance¹³⁷ and domestic use¹³⁸ requirements surely affect foreign producers of similar goods. This is especially true if the particular producers hold a large market share in the subsidizing nation prior to the issuance of the subsidy measures. For this reason, any export or domestic use requirements will probably not qualify for an Article XX (g) exemption. Renewable energy subsidies that do not employ such explicit requirements might meet this final Article XX (g) requirement if they do not utilize other regulations that incidentally fail the “even-handed” test.

The GATT Article XX chapeau presents another similar hurdle for all Article XX exceptions.

132. See *supra* notes 111 through 116 and accompanying text. This requirement seems less constrictive than Article XX (b)'s “necessary” requirement, but utilizes similar considerations in application. Renewable energy subsidies that fail under the XX (b) requirement will also likely fail under the XX (g) “reasonably related” requirement.

133. Or measures that include domestic use or export performance contingencies, but are shown to be absolutely necessary to serve a conservation goal.

134. *U.S.–Gasoline Appellate Report*, *supra* note 112; see also *U.S.–Shrimp*, *supra* note 126, ¶

143. Both the *U.S.–Gasoline* and *U.S.–Shrimp* Panels found that the measures at issue were “even-handed” because they regulated both domestic and foreign producers in the same way.

135. *U.S.–Gasoline Appellate Report*, *supra* note 112, at 20–21.

136. Rather than in terms of placing regulations on behavior.

137. “China’s policies have . . . displaced U.S. exports to China and to third country markets— affecting trade flows that reached \$16 billion in 2009.” Petition for Relief Under Section 301 of the Trade Act of 1974, as Amended: China’s Policies Affecting Trade and Investment in Green Technology, Sept. 9, 2010 [hereinafter Section 301 Petition], <https://ustr.gov/sites/default/files/09-09-2010%20Petition.pdf>. Although the WTO never ruled on this petition, the fact that China removed its measure indicates that the results were indeed not even-handed.

138. *Canada–FIT Program*, *supra* note 74, ¶¶ 3.1(a), 3.4(a) (holding that Ontario’s local content subsidy restricted Japan’s and the EU’s access to the Canadian renewable energy market).

2. *Chapeau to Article XX*

The chapeau's purpose is to limit "abuse of the exceptions" of Article XX.¹³⁹ In addition to the specific requirements under each provision of the GATT Article XX exemptions, the overarching Article XX chapeau excludes exemptions if a measure "constitute[s] a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade."¹⁴⁰

There are no clear standards for applying the chapeau's standard, but resolution of the *U.S. –Shrimp* and the *Canada –Tariff Program* disputes indicate that the conditional subsidies mentioned so far probably violate it. In *U.S. –Shrimp*, the United States' measure of providing import permits only to those who used United States approved turtle protecting devices, while refusing permits to importers who used comparably effective methods for excluding turtles, was held to be both discriminatory and unjustified.¹⁴¹ In *Canada–FIT Program*, although Canada did not assert an Article XX exemption, the WTO Panel affirmatively held that the domestic use requirement was sufficient to show a purpose of protecting domestic energy producers, rather than environmental or resource protection, as was inconsistent with WTO principles.¹⁴² Had an Article XX defense been raised, it likely would have been rejected because the measure would probably have constituted a "restriction on international trade."

If a renewable energy subsidy includes any origin based or origin effecting discrimination requirements, it will likely run afoul of the chapeau's terms—as did the permitting policies in *U.S.–Shrimp* for unjustifiably restricting trade from some countries, even if such origin restrictions were incidental.¹⁴³ If the reasoning in *U.S.–Shrimp* does not apply directly to content and export contingent renewable energy subsidies, the *Canada –FIT Program* Panel finding¹⁴⁴ that Ontario's contingencies stemmed from a primary purpose of protecting domestic producers probably will. Subsidy programs that explicitly require export performance or domestic content quotas will certainly violate the Article XX chapeau. Renewable energy subsidies that do not include such requirements will satisfy the chapeau's requirements if they do not have an unjustified discriminatory effect and do not restrict international trade.

139. *U.S.–Gasoline Appellate Report*, *supra* note 112, at 22.

140. GATT, *supra* note 13, Article XX.

141. *U.S.–Shrimp*, *supra* note 126, ¶ 184.

142. *Canada–FIT Program*, *supra* note 74.

143. *U.S.–Shrimp*, *supra* note 126, ¶ 184.

144. *See supra* note 140 and accompanying text.

Whether Members provide subsidies or take another investment measure, the employment of conditions such as export performance or domestic content requirements will not qualify for Article XX exceptions to violations of the GATT or TRIMs Agreement. Other renewable energy incentives might qualify for exceptions, assuming they violate the GATT or TRIMs Agreement in the first place, if they do not result in prejudice to international trade or are the only means available to the Member to mitigate climate change.¹⁴⁵ However, a subsidy that meets the “subsidy” definition under the SCM and violates its “prohibited” or “actionable” provisions does not qualify for Article XX¹⁴⁶ or any SCM-specific environmental exceptions.¹⁴⁷

Because many countries’ renewable energy industries will see stifled growth without some domestic-specific incentives,¹⁴⁸ and because many uncertainties persist regarding the viability of other sorts of renewable energy subsidies, the WTO rules should be amended and/or clarified. The following section proposes some possible amendments and clarifications.

145. See *supra* notes 111–116 (pertaining to GATT Article XX(b)), 130–132 (addressing limitations under Article XX(g)), and 140–141 (regarding the Article XX chateau limitations) along with accompanying text.

146 Although some scholars have argued that the GATT Article XX exception should apply to the SCM Agreement, the SCM Agreement does not mention GATT exceptions (unlike TRIMs), and no real-world application of Article XX exceptions has ever extended to SCM Agreement violations. See, e.g., Christopher Tran, *Using GATT, art. XX to Justify Climate Change Measures in Claims Under the WTO Agreement*, 27 ENVTL. & PLAN. L. REV. 346, 355–56 (2010) (“An-other option, potentially open on the current agreements, is to invoke GATT, Art XX to justify SCM inconsistency—an argument slowly coming to prominence among commentators.”).

147 The original SCM Agreement provided for an environmental exception to render subsidies within its purview “non-actionable.” See SCM, *supra* note 16, Art. 8.2(c). However, Article 8 exceptions were allowed to expire in 1999. *Dispute Settlement, World Trade Organization: Subsidies and Countervailing Measures*, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT 17 (2003), unctad.org/en/docs/edmmisc232add15_en.pdf. Some argue that the expiration of the SCM Article 8 provisions is further evidence that no other exceptions, including those under GATT Article XX, were meant to apply either. Others argue the opposite. See INGRID JEGOU & LUCA RUBINI, ICTSD PROGRAMME ON COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT, *THE ALLOCATION OF EMISSION ALLOWANCES FREE OF CHARGE: LEGAL AND ECONOMIC CONSIDERATIONS* 40 (2011) (arguing that Article XX can apply to SCM Agreement disputes because the environmental exceptions covered by the two are, or were, distinct, and because the SCM Agreement does not explicitly state that GATT art. XX does not apply).

148. See, e.g., Raymond Saner, *Bolivia’s Energy-Sector Intervention is a Missed Opportunity for Economic Development*, GSI SUBSIDY WATCH, July 2010, at 5, www.iisd.org/gsi/sites/default/files/sw_39_july_2010.pdf (discussing the limited policy options available to low income countries).

IV. AMENDING THE WTO RULES FOR OPTIMAL IMPLEMENTATION OF RENEWABLE ENERGY SUBSIDIES

Under the current WTO rules, it is clear that Member countries cannot use renewable energy subsidies that contain domestic content requirements or export quotas.¹⁴⁹ Alternative subsidies that are less overtly geared toward domestic industries might be untenable as well.¹⁵⁰ The current rules then clash with some of the most effective mechanisms to combat climate change.¹⁵¹ Domestic content requirements help incentivize the development of domestic renewable energy manufacturers and producers where development might not otherwise occur—thereby creating, or at least accelerating, valuable potential for climate change mitigation.¹⁵² Moreover, the uncertainties regarding WTO criteria for less aggressive renewable energy subsidies yield apprehension toward adoption generally.¹⁵³ Opportunities for renewable energy development and climate change mitigation are surely being lost.

WTO member countries, largely also Members to the UNFCCC and Kyoto Protocol, should keep these issues in mind not just during climate change negotiations,¹⁵⁴ but also, perhaps more importantly,¹⁵⁵ during future trade negotiations. A number of high GHG emitting WTO Members have rejected obligations under climate change agreements at least in part because of concerns over clashes with WTO rules.¹⁵⁶

149. *See, supra* Sect. II.

150. *See, supra* Sect. III.

151. RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION, IPCC 54 (2011), srren.ipcc-wg3.de/report (discussing the importance of subsidies for solar, geothermal, hydropower, wind, and other renewable energy development to mitigate the effects of climate change).

152. *Id.* at 54. *See also* *Canada–FIT Program*, *supra* note 74.

153. WORLD TRADE ORGANIZATION, FROM GATT TO THE WTO: THE MULTILATERAL TRADING SYSTEM IN THE NEW MILLENNIUM 149 (2000) (describing such uncertainty as its own, albeit less definitive, limit on government action).

154. Many experts and scholars advocate for re-negotiating climate change treaties to comport with WTO rules. *See, e.g.*, Daniel McNamee, *Climate Change, the Kyoto Protocol, and the World Trade Organization: Challenges and Conflicts*, SUST. DEVELOP. L. & POL'Y 41, 44 (2006) (discussing how Members should adapt their efforts to the WTO); *Trading Up Kyoto*, *supra* note 33. This Article argues that WTO rules should at least meet climate change measures and agreements half way.

155. Many recent actions to mitigate climate change have resulted from independent national action rather than pursuant to international obligations. Section III, *supra*, discusses disputes against China, India, and Canada—none of these countries underwent these actions to comply with the Kyoto Protocol.

156. *See* CORINA HAITA, INTERNATIONAL CENTER FOR CLIMATE GOVERNANCE, THE STATE OF COMPLIANCE IN THE KYOTO PROTOCOL 2 (2012) (“China and India do not have commitment targets within the Kyoto Protocol”); UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, OUTCOME OF THE WORK OF THE AD HOC WORKING GROUP ON FURTHER COMMITMENTS FOR ANNEX I PARTIES UNDER THE KYOTO PROTOCOL AT ITS SIXTEENTH SESSION (2001), http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/awgkp_outcome.pdf (discussing how the United States and Canada have rejected further emissions obligations).

Whether the international community succeeds in climate change mitigation efforts is then largely dependent on whether the WTO rules can better accommodate mitigation goals. The WTO rules should better acknowledge the existence of non-trade considerations, such as climate change, and allow for some deviations from the dominant ideals of trade liberalization.

WTO Members should offer amendments to the GATT, SCM Agreement, and TRIMs Agreement that can foster climate change mitigation through renewable energy subsidization and development. In considering changes to the existing WTO rules, Members face a range of options under the GATT, SCM Agreement, and TRIMs Agreement. Among other things, the WTO could eliminate or reduce domestic content and export restrictions, adapt the language of GATT Article XX exceptions, change the SCM Agreement's "actionable subsidy" requirements, or add whole new exceptions geared toward climate change mitigation.

A. Eliminating or Reducing Domestic Content and Export Restrictions

A broad reaching amendment could eliminate or lessen restrictions on domestic content and/or quantitative export requirements, which would aid nations in developing domestic energy production and security.¹⁵⁷ However, measures aimed at renewable energy and climate change mitigation are only a small component of international trade. Whether or not the WTO restrictions on domestic content and export requirements are generally healthy for the global economy, eliminating these restrictions for all measures is politically untenable, if not unwise.

Instead, the WTO could eliminate these restrictions only for measures geared toward renewable energy development and/or other climate change mitigation policies. To eliminate concern over permanent domestic favoritism, the domestic content and quantitative export requirements could be suspended only for a period of time. This would allow for circumvention of free trade principles only to the extent it is needed to develop a new clean energy industry. As a result, more Member countries could bolster their domestic renewable energy economy, contribute to an overall increase in global renewable energy generation, and thereby help to reduce the incidence of climate change.

157. See *Canada-FIT Program*, *supra* note 74.

B. Amending the GATT Article XX exceptions

A more nuanced approach might specifically address the language of the GATT Article XX (b) and (g) exceptions. The “necessity” requirement of Article XX (b), the “even-handed” requirement of Article XX (g), and the chapeau could all be amended to offer more definitive leeway to renewable energy measures that do not overtly discriminate. This way, Members who wish to employ renewable energy subsidies, but who would otherwise worry whether incidental free-trade effects will bring their programs out of WTO compliance, can do so without apprehension. This will inevitably result in more adoption of renewable energy. Specifically, the language of Articles XX (b) and (g), and the chapeau could be amended as follows.¹⁵⁸

1. GATT Article XX(b)

Subject to the Article XX chapeau, “nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: . . .”¹⁵⁹

(b) “~~necessary~~ implemented in order to protect human, animal or plant life or health.”

By changing “necessary” to “implemented in order to,”¹⁶⁰ the human life and health exception might apply to measures that have incidental effects on free trade. Moreover, “alternative measures either consistent or less inconsistent”¹⁶¹ with free trade ideals could no longer serve as justification for denying Article XX(b) exemption.

2. GATT Article XX(g)

Subject to the Article XX chapeau, “nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: . . .”¹⁶²

(g) “relating to the conservation of exhaustible natural resources, if such measures are made in conjunction with restrictions on domestic production or consumption, or the restrictions on

158. Underlined text connotes proposed insertions of language, and ~~struck through~~ text refers to proposed deletions of language.

159. This is the introductory language to the Article XX exceptions.

160. Or anything less restrictive than “necessary.”

161. See U.S. –Gasoline, *supra* note 112.

162. See note 158.

foreign production only persist as long as is needed to obtain conditions for such conservation to occur...."

This added language would qualify the Article XX(g) exception to effectively eliminate restrictions on domestic content and export requirements for renewable energy subsidies aimed at conservation of the atmosphere, clean air, or ecosystems. However, the exception would only be available as long as is needed to bolster domestic renewable energy production. Whether the burden would be on the complaining Member or the subsidizing Member, an amendment similar to the above proposal could help reduce some of the apprehension associated with developing greener domestic energy policies.

3. *GATT Article XX Chapeau*

The GATT Article XX chapeau limits the use of all Article XX exceptions to ensure 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. . ."¹⁶³ To allow for renewable energy subsidies that even incidentally favor domestic development, and to give the above Article XX amendments¹⁶⁴ any effect, the chapeau could be expanded to elaborate on what constitutes "arbitrary or unjustifiable" discrimination. Or, as shown in the following proposed addition, the definition could be narrowly modified to specify what does *not* constitute "arbitrary or unjustifiable" discrimination or a "disguised restriction on international trade":

"Measures aimed at or relating to minimizing greenhouse gas emissions or other pollution of the international environment are not arbitrary or unjustifiable discrimination, and are not disguised restrictions on international trade."¹⁶⁵

This addition, or something similar, but more eloquently articulated, could be inserted at the end of the Article XX chapeau, or at

163. GATT, *supra* note 13, Article XX chapeau.

164. See Sect. IV.B.1 and IV.B.1.

165. The definition might carry on to the effect of "A measure may have more than one aim, provided that secondary aims further the alleged aim in some way." This proposal would clarify the treatment of "aimed at" and "relating to" both in this chapeau addition and in Article XX (g). Specifically, this extended addition would negate the assumption that a measure cannot be employed with both the aim of conserving natural resources, for instance, and the aim of bolstering domestic energy sectors. The aim of domestic protection helps a country to conserve natural resources (or protect human health) too, so it could be allowable.

the end of Article XX as a whole. A similar qualification could alternatively be applied to only the Article XX(b) and/or Article XX(g) exceptions, or to an entirely new GATT exception pertaining to climate change mitigation specifically.

If amendments to these exceptions results in increased viability for renewable energy subsidies under the GATT and TRIMs Agreement, the exceptions would also have to apply to the SCM Agreement to have a meaningful effect.¹⁶⁶ The SCM Agreement could easily be amended to include, like the TRIMs Agreement, all GATT exceptions.

C. Clarifying Actionable Subsidies under the SCM Agreement

In addition to the per se constraints on domestic content and export requirements within the SCM Agreement's "prohibited" subsidy provisions,¹⁶⁷ the SCM's "actionable" subsidy provisions restrict the use of subsidies that have incidental "adverse effects to the interests of other Members."¹⁶⁸ "Adverse effects" exist if the subsidies injure the domestic industry of other WTO Members, abrogate or diminish benefits conferred by GATT, or result in "serious prejudice to [their] interests,"¹⁶⁹ as specified by Articles 5, 15.7, and 6.3 of the agreement.

Article 15.7 sets out a list of factors to consider when determining whether injury has occurred.¹⁷⁰ Every single factor works against subsidies that have any impact on foreign markets. Likewise, Article 6.3 sets out several independent basis for concluding that a subsidy results in "serious prejudice."¹⁷¹ As is consistent with the general dominance of

166. Most subsidies in the colloquial sense would count as "subsidies" under the SCM Agreement. Even the tariffs in *Canada-FIT Program* would amount to SCM Agreement "subsidies" had the complainants provided the proper evidence of a "benefit" conferred. Indeed, the Panel even explained that the SCM claim could have been successful with a different method of proving the existence of a "benefit." See, *supra* note 89 and accompanying text.

167. Discussed generally in Section IV.B.1. For amending the SCM Agreement, the "prohibited" subsidies provisions could either be entirely stricken, or qualified to allow for climate change mitigation, renewable energy development, or renewable energy subsidies specifically.

168. See *id.*, Art. 5.

169. See *id.*, Arts. 5(a)–(c).

170. See Section II.B. for a discussion of the following factors: "(i) the trade effects of the subsidy, (ii) significant increase of subsidized imports, (iii) an imminent, substantial increase in exports to complainant's domestic market, (iv) "significant depressing or suppressing effect on domestic prices" that will increase demand for imported goods, and (v) product inventories."

171. SCM Agreement Article 6.3 reads:

Serious prejudice in the sense of paragraph (c) of Article 5 may arise in any case where one or several of the following apply: (a) the effect of the subsidy is to displace or impede the imports of a like product of another Member into the market of the subsidizing Member; (b) the effect of the subsidy is to displace or impede the exports of a like product of another Member from a third country

trade liberalization ideals throughout the SCM and other WTO Agreements, every independent basis for deeming a subsidy "actionable" under Article 6.3 includes subsidies with incidental effects on foreign markets.

Amendments to the SCM Agreement that aim to reduce the constraints on renewable energy subsidies with even slight unintended effects on foreign markets should address the terms of the above provisions, which define what "adverse effects" make a subsidy "actionable." Articles 15.7 and 6.3 might be entirely rewritten to allow climate change mitigation or renewable energy development goals to trump trade liberalization, at least in some circumstances. Moreover, the SCM agreement might incorporate exceptions or defenses for subsidies aimed at climate change mitigation or domestic renewable energy development.

D. Adding Exceptions.

Finally,¹⁷² the WTO agreements could be amended to include exceptions for climate change mitigation initiatives generally, or renewable energy subsidies specifically. Exceptions or defenses could alternatively incorporate obligations pursuant to other international treaties aimed at climate change mitigation.¹⁷³ These exceptions could be added to the GATT, and incorporated in to the TRIMs and SCM Agreements. Alternatively, or in addition, the SCM Agreement's expired environmental exception could be reinstated in conjunction with the proposed GATT Article XX exception amendments¹⁷⁴

If any of the above changes occur, WTO Member countries could implement policies to increase their domestic renewable energy

market; (c) the effect of the subsidy is a significant price undercutting by the subsidized product as compared with the price of a like product of another Member in the same market or significant price suppression, price depression or lost sales in the same market; (d) the effect of the subsidy is an increase in the world market share of the subsidizing Member in a particular subsidized primary product or commodity as compared to the average share it had during the previous period of three years and this increase follows a consistent trend over a period when subsidies have been granted.

172. "Finally," in terms of this article's proposals, not as an indication that this discussion of amendments is comprehensive in any way.

173. For example, the expected Kyoto Protocol replacement.

174 See § IV.B. This will help in scenarios, like most RE subsidies after the *Canada-FIT* dispute, when the subsidy is subject to GATT, TRIMs, and SCM. Even if we do not extend the Article XX exceptions to the SCM, the reinstated old exception might be enough to cover such a subsidy.

generation with more certainty.¹⁷⁵ Additionally, future climate change agreements might employ more effective mitigation tactics than did the Kyoto Protocol.¹⁷⁶ As a result, the international community would realize immense latent opportunities for climate change mitigation.

V. CONCLUSION

The rate of renewable energy adoption will largely determine the success of climate change mitigation efforts. Subsidies for the renewable energy industry, currently far outweighed by fossil fuel subsidies, will be necessary to establish greater adoption of renewable energy technologies. Because WTO rules impose constraints on subsidies based on ideals of international market freedom above all else, potential for nations to develop their domestic renewable energy industries is severely limited. This article proposed some possible amendments to the GATT, the SCM Agreement, and the TRIMs Agreement that Members might consider in future trade negotiations. These, or similar, amendments might bolster the adoption of renewable energy production worldwide.

175. Even if the Agreements are not amended, WTO Panels could alter their interpretation of the Agreements to similar effects, provided that the new interpretations are not inconsistent with the Agreements' text. Because WTO Panels are not bound by previous decisions, they might be persuaded to abandon their strict allegiance to trade liberalization concerns. *See Legel Effect of Panel and Appellate Body Reports and DSB Recommendations and Rulings*, WTO, https://www.wto.org/english/tratop_e/dispu_e/dispu_settlement_cbt_e/c7s2p1_e.htm (last visited, May 8, 2015).

176. *See* Mary J. Bortscheller, *Equitable But Ineffective: How the Principle of Common But Differentiated Responsibilities Hobbles the Global Fight Against Climate Change*, 10 SUSTAINABLE DEV. L. & POL'Y 49 (2010), digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1036&context=sdlp (discussing the lack of binding obligations within the Kyoto Protocol).

