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## Fueled by Free Trade: WTO Trade Agreements Ensuring the Proliferation of Solar Technology

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# FUELED BY FREE TRADE: WTO TRADE AGREEMENTS ENSURING THE PROLIFERATION OF SOLAR TECHNOLOGY

JOHN FERRISS\*

## INTRODUCTION

The demand for renewable energy, particularly wind and solar power, has seen a meteoric rise in the last decade. In the United States, solar energy capacity increased at a rate of forty percent per year from 2000 to 2008.<sup>1</sup> In 2008 alone, for example, the solar capacity in the United States expanded to 9,813 megawatts (“MW”), a total increase in excess of sixteen percent.<sup>2</sup> While this still meant that solar energy only provided about 0.1% of the nation’s electricity, the Department of Energy predicted that this could grow to ten percent by the year 2025.<sup>3</sup> A study by the International Energy Agency in 2011 estimated that the world could derive a third of its electricity from the sun by 2060.<sup>4</sup>

Germany has increased its solar capacity to 18 million MW in 2011, capable of powering 5.1 million homes.<sup>5</sup> China has become a world leader in manufacturing photovoltaic panels, having increased its manufacturing by a factor of four between 2009 and 2011.<sup>6</sup> These numbers indicate a clear desire worldwide to maximize output from renewable energy.

This increase in demand, however, has resulted in fairly frequent trade disputes between nations seeking to expand or preserve their

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<sup>1</sup> Office of Energy Efficiency & Renewable Energy, *Study: Solar Power Could Provide 10% of U.S. Electricity by 2025*, EERE NETWORK NEWS (June 25, 2008), [http://apps1.eere.energy.gov/news/news\\_detail.cfm/news\\_id=11835](http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=11835), archived at <http://perma.cc/DDX9-Q3D3>.

<sup>2</sup> Solar Energy Industries Association, *US Solar Industry in Review, 2008*, available at <http://www.seia.org/sites/default/files/us-solar-industry-year-in-review-2008-120627092759-phpp01.pdf>.

<sup>3</sup> Office of Energy Efficiency & Renewable Energy, *supra* note 1.

<sup>4</sup> Ben Sills, *IEA Says Solar May Provide a Third of Global Energy by 2060*, BLOOMBERG NEWS (Dec. 2, 2011), <http://www.businessweek.com/news/2011-12-02/iea-says-solar-may-provide-a-third-of-global-energy-by-2060.html>, archived at <http://perma.cc/9TTT-26FQ>.

<sup>5</sup> *German Solar Power Output Up 60 Pct In 2011*, REUTERS (Dec. 29, 2011), <http://www.reuters.com/article/2011/12/29/germany-solar-idAFL6E7NT1WK20111229?sp=true>, archived at <http://perma.cc/U9V3-Y3Z9>.

<sup>6</sup> *Chinese Solar Industry Gears up Following EU-China Deal*, CRI (Aug. 6, 2013) <http://english.cri.cn/11354/2013/08/06/2361s780295.htm>, archived at <http://perma.cc/YH5D-3KCF>.

country's green industries. The European Union ("EU") accused the Chinese solar panel industry of dumping, or selling its products at prices below what they would charge domestically.<sup>7</sup> After the EU threatened to impose heavy anti-dumping tariffs on Chinese solar panels, representatives from both countries met, and agreed to set a minimum price and a quota for exports.<sup>8</sup> But this is one example, and, for the purposes of this Note, not a demonstrative one given how the countries resolved the matter themselves.

Since the beginning of this decade, there have been seven cases brought to the World Trade Organization ("WTO") concerning members' measures, subsidies, or restrictions on trade in renewable energy technology and resources, not counting bio-diesel cases.<sup>9</sup> Thus, with an average of over two cases per year, green technology is a rather contentious industry as well as an in-demand commodity. Of course, the WTO, whose mission is to encourage the freest trade conditions possible among nations, is the appropriate forum to address such disputes.

This Note will focus on two such cases that illustrate some of the different disputes that can arise in the international trade of green technology. For example, India's Jawaharlal Nehru National Solar Mission was inaugurated in 2010 as part of a long-term plan to develop India's use of solar energy.<sup>10</sup> The goal is to have a solar capacity of 1,000 MW by the end of this year, with more over the next eleven years.<sup>11</sup> However, the new program requires that contractors derive a large portion of their material from domestic manufacturers.<sup>12</sup> In response to these measures, the United States has filed a complaint with the WTO Dispute Settlement Body ("DSB"),<sup>13</sup> which was created under the WTO Dispute Settlement

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<sup>7</sup> *Chinese Solar Industry Gears up Following EU-China Deal*, *supra* note 6.

<sup>8</sup> *Id.*

<sup>9</sup> *Chronological List of Disputes Cases*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_status\\_e.htm](https://www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm), archived at <http://perma.cc/W5K2-VFEG> (last visited Apr. 1, 2015).

<sup>10</sup> Sujay Mehdudia, *Manmohan Singh Launches 'Solar India'*, HINDU (Jan. 12, 2010), <http://www.hindu.com/2010/01/12/stories/2010011260911100.htm>, archived at <http://perma.cc/ZCR7-F54F>.

<sup>11</sup> *Id.*

<sup>12</sup> MINISTRY OF NEW & RENEWABLE ENERGY, MIN. OF INDIA, JAWAHARLAL NEHRU NATIONAL SOLAR MISSION GUIDELINES FOR SELECTION OF NEW GRID CONNECTED SOLAR POWER PROJECTS, BATCH II 7–8 (2011), available at [http://mnre.gov.in/file-manager/UserFiles/jnnsn\\_gridconnected\\_24082011.pdf](http://mnre.gov.in/file-manager/UserFiles/jnnsn_gridconnected_24082011.pdf).

<sup>13</sup> Request for Consultations by the United States, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/1 (Feb. 6, 2013).

Understanding.<sup>14</sup> The United States alleges that India's measures violate Article XXII of the GATT 1994, Article 8 of the WTO Agreement on Trade-Related Investment Measures ("TRIMS"), and Articles 4, 7, and 30 of the WTO Agreement on Subsidies and Countervailing Measures ("SCM").<sup>15</sup>

In May of 2012, China requested consultations with the United States, accusing the United States of improperly imposing countervailing duties on Chinese exports, including solar panels.<sup>16</sup> Specifically, the Chinese government claims that the U.S. Department of Commerce ("DOC") incorrectly designated the exporters of these products as "public bodies" and as such are susceptible to countervailing duties.<sup>17</sup> According to China, this violates Articles 1, 2, 11, and 14 of the SCM Agreement.<sup>18</sup>

As consultations failed to reach any resolution, both of these cases have assembled panels to adjudicate the respective matters.<sup>19</sup> These two cases cover two separate areas of international trade law; their only common characteristic is that the traded goods in question include solar technology. The case between the United States and India (known as *India—Certain Measures Relating to Solar Cells and Solar Modules*) deals with national treatment, which is when a nation passes laws, regulations, or taxes that favor domestic products over imports.<sup>20</sup> The dispute between the United States and China (*US—Countervailing Duty Measures on Certain Products from China*) deals with countervailing duties, which are taxes that an importing country will apply to products that the exporting country has subsidized to make cheaper than domestic products.<sup>21</sup> This Note will elaborate on both national treatment and countervailing duties below. The differences illustrate how solar technology can become involved in various types of trade disputes.

This Note will explore the course of these trade disputes and predict the outcome in light of the relevant international trade laws. After analyzing these disputes and presumed outcomes, the answer as to whether

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<sup>14</sup> See generally *Dispute Settlement*, WORLD TRADE ORG., [http://www.wto.org/english/tratop\\_e/dispu\\_e/dispu\\_e.htm](http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm), archived at <http://perma.cc/C8CX-YPRM> (last visited Apr. 1, 2015).

<sup>15</sup> Request for Consultations by the United States, *supra* note 13.

<sup>16</sup> Request for Consultations by China, *United States—Countervailing Duty Measures on Certain Products from China*, WT/DS437/1 (May 25, 2012).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> See *Chronological List of Disputes Cases*, *supra* note 9.

<sup>20</sup> DANIEL C. K. CHOW & THOMAS J. SCHOENBAUM, INTERNATIONAL TRADE LAW: PROBLEMS, CASES, AND MATERIALS 142–43 (Daniel C.K. Chow & Thomas J. Schoenbaum eds., 2nd ed. 2013) [hereinafter INTERNATIONAL TRADE LAW].

<sup>21</sup> *Id.* at 443–44.

current international trade agreements impede the proliferation of sustainable technology overseas will likely be no. WTO trade obligations are meant to ensure the freest trade conditions possible for all commodities, including green technology equipment.

Despite countries trying to protect nascent green industries, the reality of the global market will ensure that new trade agreements will facilitate the spread of green technologies worldwide, just as countries have previously raised the curtain on other technologies (i.e., allowing countries with comparative advantage in manufacturing renewable energy technology to trade freely, the fact that China manufactures so much of the world's electronics being one example). The end result of this will mean the extensive proliferation of solar technology worldwide with the least interference from non-market forces.

The first section of this Note will describe the WTO Dispute Settlement process and set the background for green technology disputes, including the relevant substantive terms governing disputes. The second section will discuss the case concerning the Jawaharlal Nehru National Solar Mission, *India—Certain Measures Relating to Solar Cells and Solar Modules*, including the contested trade provisions. The third section will then cover *US—Countervailing Duty Measures on Certain Products from China*, including an examination of the provisions brought into question. The fourth section will then predict the outcome of these cases, looking to prior DSU cases that addressed these measures.

## I. BACKGROUND:

### A. *Origins of Trade Disputes*

A WTO dispute arises when one member (a country, as WTO membership is limited to signatory nations) believes that another has adopted policies that violate international trade terms to which both countries voluntarily agreed.<sup>22</sup> The motivations for such breaches vary on a case by case basis, but they generally fall under the category of protectionism, that is, trying to protect domestic industries from foreign competition.<sup>23</sup> Two protectionist motivations appear relevant to the two cases in question.

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<sup>22</sup> *Understanding the WTO: Settling Disputes: A Unique Contribution*, WORLD TRADE ORG., [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/disp1\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/disp1_e.htm), archived at <http://perma.cc/9MGW-RBKP> [hereinafter *A Unique Contribution*].

<sup>23</sup> *Protectionism*, ENCYCLOPÆDIA BRITANNICA, <http://www.britannica.com/EBchecked/topic/479643/protectionism>, archived at <http://perma.cc/3PK6-CQKK> (last visited Apr. 1, 2015).

The first motivation is creating and nurturing a new industry in a country, usually a developing nation trying to create a new source of prosperity and jobs.<sup>24</sup> This is a likely motivation for India and its Solar Mission, as the program indicates that promoting “manufacturing in the solar sector in India” is one of its goals.<sup>25</sup> The second protectionist motivation, possibly the position of the United States for its measures against Chinese solar panels, is protecting an existing domestic industry from foreign competition. There are certainly American groups and interests that want the United States to remain a leader in solar technology manufacturing.<sup>26</sup> Again, these considerations of motives for violating WTO agreements demonstrate how the solar manufacturing industry is considered worth protecting for countries that have it, and worth developing for those that do not. The cost, however, for these measures is that solar technology is not as economical as it should be.

Just as the motives for violating international trade agreements can vary, the methods by which a country does so are equally numerous. Excessive or uneven tariffs and import quotas or restrictions only scratch the surface of possible scenarios leading to WTO disputes. For the purposes of this Note, however, only two measures, domestic content requirements and countervailing duties, are relevant to India and China’s respective cases.

### B. *National Treatment*

In the context of international trade, national treatment refers to laws, regulations or other government measures that discriminate against imports once they have cleared a country’s customs.<sup>27</sup> Such measures provide either incentives for consumers and businesses to favor domestic products over imports, or disincentives for the consumption of imports, adversely affecting competition in the market for these products.<sup>28</sup> In effect, post-importation discrimination undermines any benefits a trade concession (e.g., reducing or eliminating the tariff on that product) would grant that imported product;<sup>29</sup> what good is a reduced tariff on solar panels

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<sup>24</sup> *Id.*

<sup>25</sup> MINISTRY OF NEW & RENEWABLE ENERGY, *supra* note 12, at 2.

<sup>26</sup> *E.g.*, Dave Johnson, *America Deserves A Solar Manufacturing Industry*, CAMPAIGN FOR AMERICA’S FUTURE (Aug. 16, 2013) <http://ourfuture.org/20130816/america-deserves-a-solar-manufacturing-industry>, archived at <http://perma.cc/ST67-D2E4>.

<sup>27</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 142.

<sup>28</sup> *Id.* at 143.

<sup>29</sup> *Id.* at 142.

if the importing country enacts laws that would directly make its citizens only want to buy domestic panels?

Domestic content requirements are a self-explanatory example of national treatment, where a government requires businesses to acquire a percentage or all of its materials or equipment from domestic suppliers or manufacturers.<sup>30</sup> Firms must meet these domestic requirements if they want the government to grant them access to special subsidies, contracts, or even to the market itself.<sup>31</sup> The result of domestic content requirements is a chilling effect not only on importation, but also on foreign investment.<sup>32</sup> In other words, domestic content requirements make consumers less likely to buy imports, foreign producers less likely to send imports to the country, and disincentivize foreign businesses from investing in countries where they won't have the freedom to choose the suppliers they prefer. To prevent such adverse economic effects, the WTO generally prohibits domestic content requirements through agreements such as TRIMS and SCM.<sup>33</sup>

### C. *Dumping*

While neither of the cases pertains to dumping *per se*, dumping is closely related to countervailing duties, and thus merits a brief description. The U.S. Tariff Act defines dumping as “the sale or likely sale of goods at less than fair value.”<sup>34</sup> In other words, dumping occurs when exporters charge less for their products abroad than they would charge in-country.<sup>35</sup> This is not to say that imports cannot be cheaper than domestic products. To use a hypothetical, if Country A is rich in the raw materials needed to make wind turbines, then manufacturers in Country A are free to make their turbines cheaply, and pass the savings on to buyers in Country B, who don't have the same natural resources as Country A. On the other hand, if Country A has no particular conditions that make wind turbine manufacturing less costly than in Country B, and turbine

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<sup>30</sup> *Domestic Content Requirements*, ENCYCLOPEDIA WORLD ECONOMY (Sept. 12, 2011, 3:14 PM) <http://world-economics.org/89-domestic-content-requirements.html>, *archived at* <http://perma.cc/9XJL-HH87>.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*; Request for Consultations by the United States, *supra* note 13, at 2.

<sup>34</sup> 19 U.S.C. § 1677(34) (2012).

<sup>35</sup> *Understanding The WTO: The Agreements: Anti-dumping, subsidies, safeguards: contingencies, etc.*, WORLD TRADE ORG., [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/agrm8\\_e.htm#subsidies](http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm8_e.htm#subsidies), [hereinafter *WTO: Antidumping*], *archived at* <http://perma.cc/52GJ-9K9P>.

manufacturers simply discount the turbines they export to Country B, that would be dumping. The concern of countries importing dumped products is that the exporter is dumping in order to undercut domestic manufacturers and drive them out of the market. Once they have eliminated domestic competition, the exporter is then free to charge whatever they want for their product.<sup>36</sup>

*D. Countervailing Duties*

The major difference between dumping and countervailing subsidies is where this “discount” comes from. In antidumping the manufacturer lowers the export price on their own initiative, possibly taking a loss, presumably to corner the foreign market in their product. In countervailing duties, the manufacturer’s home government grants them a subsidy for exports, and the manufacturers pass the savings onto the consumers abroad.

Countervailing duties arise from subsidies on exports, which is itself inconsistent with international trade obligations, particularly under the SCM Agreement.<sup>37</sup> When an exporting country gives prohibited subsidies to an industry that hurts an importing country’s industry, the importing country has two options. The importing country can either file a complaint with the WTO Dispute Settlement Body and let a panel decide, or it can act unilaterally by imposing a countervailing duty.<sup>38</sup> This countervailing duty is an extra tariff that cancels out the financial advantage of the exporting country’s subsidy.<sup>39</sup>

Again, a hypothetical example can help to illustrate and clarify this doctrine. The government of Country A gives monetary subsidies to its domestic green industry, so that merchants can sell wind turbines from A in Country B for less than similar turbines produced in B cost. As a result, A turbines out-compete B turbines, at least in terms of price. To respond to these measures by Country A, the government of Country B has two options; it can either take Country A through the WTO dispute settlement process to have the subsidies declared illegal, or counteract the effect of A’s subsidy by increasing the tariff duty on A’s turbines so they cost about the same as B turbines.

When an importing country chooses the unilateral path, that is, imposing countervailing duties, it must do so in accordance with procedures

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<sup>36</sup> *Id.*

<sup>37</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 445.

<sup>38</sup> *Id.* at 443.

<sup>39</sup> *Id.*



laid out in Part V of the SCM, which specifies that it must also follow Article IV of the 1994 General Agreement on Tariffs and Trade (“GATT 1994”).<sup>40</sup> This Note will discuss these provisions in more detail below. For now, it is sufficient to say that failure to follow these procedures will constitute a violation of international trade agreements, and the subsidizing country can then challenge the countervailing duties before the WTO.<sup>41</sup>

To refer back to the wind turbine example, if Country B imposes a countervailing duty on Country A’s turbines improperly (e.g., they failed to investigate to determine whether a subsidy was actually harming their domestic green industry),<sup>42</sup> Country A can initiate a dispute settlement case with the WTO DSB.

If Country A prevails, then Country B will have to stop the countervailing duties until it follows proper procedure. If Country B wins the case, it is free to continue the countervailing duties until Country A stops subsidizing wind turbines. In such a scenario, Country A would likely end the subsidies quickly since, by virtue of Country B’s countervailing duties, those subsidies become generous donations to the government of Country B without any benefit to Country A’s turbine industry. The dispute between China and the United States illustrates such a case, where the United States has imposed countervailing duties against Chinese-made solar panels and China contests the methods by which the United States imposed them.

When a country chooses the “multilateral” path, it must redress its grievance through the WTO dispute settlement process, which is the subject of the following section.

### *E. WTO Dispute Settlement Process*

#### 1. Consultations

The dispute settlement process in the WTO has many discrete steps, but in the simplest terms it is a two- or three-stage process (the third step takes place only when a party appeals).<sup>43</sup> The first stage is when a country files a request for consultation with the offending party.<sup>44</sup>

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<sup>40</sup> Agreement on Subsidies and Countervailing Measures art. I, III, Apr. 15, 1994, 1869 U.N.T.S. 14 available at [http://www.wto.org/english/res\\_e/booksp\\_e/analytic\\_index\\_e/subsidies\\_01\\_e.htm#top](http://www.wto.org/english/res_e/booksp_e/analytic_index_e/subsidies_01_e.htm#top), [hereinafter SCM].

<sup>41</sup> *Id.*

<sup>42</sup> *WTO: Antidumping*, *supra* note 35.

<sup>43</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 493.

<sup>44</sup> *WTO: Antidumping*, *supra* note 35; SCM, *supra* note 40, Part V.

Strictly speaking, any WTO member can file against another member allegedly not living up to its obligations; being an aggrieved party or having an interest is not necessary to initiate WTO dispute proceedings.<sup>45</sup> After consultations begin, the two nations have sixty days to resolve the dispute themselves.<sup>46</sup> This is what happened in the dispute between the EU and China over solar panel dumping.<sup>47</sup> If initial consultations fail to produce an acceptable solution for both parties, the countries can then request the DSB to form a panel to decide the case.<sup>48</sup>

## 2. The WTO Panel

A dispute settlement panel is comprised of three members, or five if both parties agree to expand the panel.<sup>49</sup> These members must be “well qualified” individuals, which the DSU defines as someone who has: 1) argued a case before a panel before; 2) served as a representative of a Member country to the WTO or in a similar capacity; 3) “taught or published on international trade law or policy”; or 4) “served as a senior trade policy official of a Member.”<sup>50</sup> Put simply, panelists are established experts in the field of international trade law. For obvious reasons, citizens of the countries that are parties to the dispute cannot serve on that case’s panel.<sup>51</sup> These panelists act in their own capacity, not as representatives of any country, and the panel only meets for the one case before them.<sup>52</sup>

Once the DSB establishes a panel, the two parties will argue their cases before it in “meetings,” which are the functional equivalent of hearings.<sup>53</sup> The first meeting is where the parties present their initial argument, with the complaining party going first, followed by a session set aside for third-party members to submit their comments to the panel.<sup>54</sup> Panelists at any time can ask the parties’ representatives questions to

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<sup>45</sup> *Id.*

<sup>46</sup> *A Unique Contribution*, *supra* note 22.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*; *see also* Request for Consultations by China, *supra* note 13.

<sup>49</sup> *See* Appellate Body Report, *European Communities—Regime for the Importation, Sale and Distribution of Bananas*, ¶132, WT/DS27/AB/R (Sept. 25, 1997).

<sup>50</sup> INTERNATIONAL TRADE LAW, *supra* note 20.

<sup>51</sup> *Chinese Solar Industry Gears up Following EU-China Deal*, *supra* note 6.

<sup>52</sup> Understanding on Rules and Procedures Governing the Settlement of Disputes art. 4.7, Apr. 15, 1994, 1869 U.N.T.S. 401, *available at* [http://www.wto.org/english/docs\\_e/legal\\_e/28-dsu.pdf](http://www.wto.org/english/docs_e/legal_e/28-dsu.pdf) [hereinafter DSU].

<sup>53</sup> *Id.* at art. 8.5.

<sup>54</sup> *Id.* at art. 8.1.

clarify their positions.<sup>55</sup> If the questions come before or after a scheduled meeting, the questions and answers can be submitted in writing.<sup>56</sup> After the first meeting, the panel will convene a second meeting to hear the parties' rebuttals.<sup>57</sup>

Once the panel has held the necessary meetings and received written submissions from all parties, the panel will then submit its ruling, or report.<sup>58</sup> After the panel submits its report, the parties have sixty days to file notice to appeal the report, or the DSB will accept and adopt the report, unless a consensus of DSB members decide not to adopt it.<sup>59</sup>

### 3. The Appellate Panel

One party or both parties can appeal the panel's decisions.<sup>60</sup> The Appellate Body, unlike the panels, is a permanent body, with seven members appointed for four-year terms.<sup>61</sup> For a given case three members of the Appellate Body review the legal rulings of the panel; factual findings are not subject to appeal.<sup>62</sup> After hearing the parties' appellate argument, the Appellate Body members issue their report, which the DSB will adopt unless there is a consensus of members not to do so.<sup>63</sup> Having some understanding of the procedure for trade disputes under the WTO, it is now appropriate to look at each case in depth.

## II. JAWAHARLAL NEHRU NATIONAL SOLAR MISSION: *UNITED STATES V. INDIA*

### A. *Goals of JNNSM*

In 2008, India's Prime Minister, Manmohan Singh, unveiled eight central "national missions" to combat climate change and global warming as part of the National Action Plan on Climate Change ("NAPCC").<sup>64</sup> One

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<sup>55</sup> *Id.* at art. 8.3.

<sup>56</sup> *A Unique Contribution*, *supra* note 22.

<sup>57</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 64.

<sup>58</sup> DSU, *supra* note 52, at app. 3.

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> DSU, *supra* note 52, at arts. 17.1–17.2.

<sup>62</sup> *Id.* at arts. 17.1, 17.6.

<sup>63</sup> *Id.* at arts. 17.9–17.14.

<sup>64</sup> *Summary: India's National Action Plan on Climate Change*, CTR. FOR CLIMATE & ENERGY SOLUTIONS (June 2008), <http://www.c2es.org/international/key-country-policies/india/climate-plan-summary>, archived at <http://perma.cc/Z8W6-V583>.

of the eight missions was the National Solar Mission, whose aim was “[t]o promote the development and use of solar energy for power generation and other uses with the ultimate objective of making solar competitive with fossil-based energy options.”<sup>65</sup> On inaugurating the program, Prime Minister Singh said:

In this strategy, the sun occupies centre-stage, as it should, being literally the original source of all energy. We will pool our scientific, technical and managerial talents, with sufficient financial resources, to develop solar energy as a source of abundant energy to power our economy and to transform the lives of our people.<sup>66</sup>

On January 11, 2010, the Indian government relaunched the solar mission as the Jawaharlal Nehru National Solar Mission (“JNNSM”), naming the program after the first Prime Minister of India.<sup>67</sup>

The prime objective of the JNNSM is to transform India into “a global leader in solar energy,” by “creating the policy conditions for its diffusion across the country as quickly as possible.”<sup>68</sup> To this end the mission has three phases with set goals for each. Phase One took place from 2012–13, with a goal of increasing solar power capacity to 1,000 MW.<sup>69</sup> The years 2014 to 2017 will comprise Phase Two, which will hopefully increase that capacity to 10,000 MW.<sup>70</sup> In Phase Three, from 2018 to 2022, administrators hope to “learn” from the progress of the last two phases and use that knowledge to increase the total capacity to 20,000 MW.<sup>71</sup>

In addition to getting more solar energy on the Indian grid, the JNNSM has the goal of making India “a leadership role in low-cost, high

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<sup>65</sup> *Id.*

<sup>66</sup> *Mission Document*, MINISTRY OF NEW & RENEWABLE ENERGY, <http://www.mnre.gov.in/solar-mission/jnnsmission/mission-document-3/> (last visited Apr. 1, 2015), *archived at* <http://perma.cc/Z5JM-TEJV>.

<sup>67</sup> *Scheme/Documents*, MINISTRY OF NEW & RENEWABLE ENERGY, <http://www.mnre.gov.in/solar-mission/jnnsmission/introduction-2/> (last visited Apr. 1, 2015), *archived at* <http://perma.cc/9UZF-V25X>.

<sup>68</sup> *Resolution*, MINISTRY OF NEW & RENEWABLE ENERGY, <http://www.mnre.gov.in/solar-mission/jnnsmission/resolution-2/> (last visited Apr. 1, 2015), *archived at* <http://perma.cc/T6VT-N93A>.

<sup>69</sup> MINISTRY OF NEW & RENEWABLE ENERGY, GOV. OF INDIA, JAWAHARLAL NEHRU NATIONAL SOLAR MISSION, TOWARDS BUILDING SOLAR INDIA, *available at* [http://www.mnre.gov.in/file-manager/UserFiles/mission\\_document\\_JNNSM.pdf](http://www.mnre.gov.in/file-manager/UserFiles/mission_document_JNNSM.pdf) (last visited Apr. 1, 2015).

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

quality solar manufacturing,” citing India’s current dependence on foreign sources of imported material and solar components.<sup>72</sup> To that end, the Ministry of New and Renewable Energy (“MNRE”) requires that all solar projects use solar cells and modules from Indian manufacturers.<sup>73</sup>

Phase One initially permitted projects to use foreign modules with concentrator photovoltaic cells or thin-film technology,<sup>74</sup> but for Phase Two, the MNRE will require that new projects get those components domestically as well.<sup>75</sup> The original exemption of thin-film solar panels actually benefitted the industry in the United States, as American manufacturers supplied the bulk of thin-film technology to India.<sup>76</sup> Specifically, the United States’s solar industry exported 75,582 peak kilowatts’ worth of thin-film modules, accounting for almost ninety three percent of total solar module exports to India.<sup>77</sup> Clearly, it would be a serious loss for the American solar industry if Indian solar projects had to purchase their thin-film modules in-country.

#### B. *United States Claim*

On February 6, 2013, as a result of JNNSM’s domestic content requirement, representatives from the United States filed a request for consultation with India’s representatives, initiating the WTO dispute settlement process.<sup>78</sup> The primary charge against India is that the JNNSM’s domestic content requirement is “inconsistent” with Article III, paragraph 4 of GATT 1994.<sup>79</sup> This GATT provision deals directly with the issue of national treatment, requiring that products from another “contracting party” are “accorded treatment no less favorable than that accorded to like products of national origin.”<sup>80</sup> To clarify, a contracting party in WTO documents

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<sup>72</sup> *Id.* at 5.

<sup>73</sup> MINISTRY OF NEW & RENEWABLE ENERGY, *supra* note 12, at 7–8.

<sup>74</sup> *Id.* at 8.

<sup>75</sup> Amiti Sen & Richa Mishra, *Local Sourcing Mandatory in Phase II of Solar Projects*, THE HINDU BUS. LINE (Oct. 20, 2013), <http://www.thehindubusinessline.com/industry-and-economy/local-sourcing-mandatory-in-phase-ii-of-solar-projects/article5254566.ece>, archived at <http://perma.cc/Z77F-WBZX>.

<sup>76</sup> Jasmeet Khurana, *Weekly Update: U.S. Takes India to WTO Against Domestic Content Requirement*, BRIDGETO INDIA BLOG, <http://bridgetoindia.com/blog/?p=1454> (last visited Apr. 1, 2015).

<sup>77</sup> U.S. ENERGY INFO. ADMIN., SOLAR PHOTOVOLTAIC CELL/MODULE SHIPMENTS REPORT 2011, at 12 (2012), available at <http://www.photon.de/newsletter/document/70166.pdf>.

<sup>78</sup> Request for Consultations by the United States, *supra* note 13.

<sup>79</sup> *Id.* at 2.

<sup>80</sup> General Agreement on Trade and Tariffs art. III:4, Oct. 30, 1947, 61 Stat. A3, 55 U.N.T.S. 194 [hereinafter GATT].

means a country that is a member of the WTO. In other words, Article III, paragraph 4 forbids governments of WTO countries from passing any measure that places more restrictions on imported products than on similar domestic products, or requiring the use of domestic products over imports.

To the delegation from the United States, the JNNSM's requirement that projects use only solar panels manufactured in India constitutes "less favorable treatment" of foreign-made solar panels.<sup>81</sup> This matters to the United States solar industry, since India is a major customer for American solar technology, having purchased 81,310 peak kilowatts worth of solar modules, or 10.24% of America's exports, in 2011.<sup>82</sup> This makes India the fifth largest importer of the United States' solar modules, after Germany, Canada, Italy, and France.<sup>83</sup> Other solar exporters, namely Japan and Australia, are concerned with India's differential treatment of imported solar panels, and have joined the case with the United States.<sup>84</sup>

In addition to violating the General Agreement on Tariffs and Trade, the JNNSM's domestic content requirement violates several provisions of the WTO Agreement on Subsidies and Countervailing Measures ("SCM").<sup>85</sup> Article 3.1(b) of SCM specifically prohibits WTO members from conditioning government subsidies "upon the use of domestic over imported goods."<sup>86</sup> This provision supplements GATT Art. III paragraph four, in that it enjoins countries from offering financial incentives to favor domestic products over imports, in addition to GATT's prohibition of unfair restraints. Article 3.2 buttresses this provision, stating that "[a] Member shall neither grant nor maintain subsidies referred to" in Article 3.1.<sup>87</sup> In India's case, the subsidy in question is the government's guarantee to buy solar power at a high rate if the participating projects procure their solar modules from Indian manufacturers.<sup>88</sup>

In the alternative, the United States asserts that the JNNSM's tying of subsidies to the domestic requirement violates Article 5(c), 6.3(a),

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<sup>81</sup> Request for Consultations by the United States, *supra* note 13, at 2.

<sup>82</sup> U.S. ENERGY INFO. ADMIN., *supra* note 77, at Table 9.

<sup>83</sup> *Id.*

<sup>84</sup> Request to Join Consultations: Communication from Japan, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/2 (Feb. 15 2013); Request to Join Consultations: Communication from Australia, *India—Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/3 (Feb. 25 2013).

<sup>85</sup> Request for consultations by the United States, *supra* note 13, at 2.

<sup>86</sup> SCM, *supra* note 40, at art. 3.1.

<sup>87</sup> *Id.* at art. 3.2.

<sup>88</sup> *United States Challenges India's Restrictions on U.S. Solar Exports*, OFFICE OF THE U.S. TRADE REP. (Feb. 2013), available at <http://www.ustr.gov/sites/default/files/034013%20December%20Enforcement.pdf>.

and 6.3(c) of the SCM.<sup>89</sup> Article 5(c) prohibits otherwise legal subsidies that cause “adverse effects to the interests of another Member,” including causing “serious prejudice to the interests of another Member.”<sup>90</sup> Article 6 defines serious prejudice in the context of Article 5. The United States delegates look to paragraph 3 of Article 6, which states:

Serious prejudice in the sense of paragraph (c) of Article 5 may arise in any case where one or several of the following apply:

- (a) the effect of the subsidy is to displace or impede the imports of a like product of another Member into the market of the subsidizing Member;
- (b) the effect of the subsidy is to displace or impede the exports of a like product of another Member from a third country market;
- (c) the effect of the subsidy is a significant price undercutting by the subsidized product as compared with the price of a like product of another Member in the same market or significant price suppression, price depression or lost sales in the same market;
- (d) the effect of the subsidy is an increase in the world market share of the subsidizing Member in a particular subsidized primary product or commodity (17) 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.<sup>91</sup>

In other words, a subsidy that would otherwise be permissible under the SCM will count as causing “serious prejudice” if it causes any of these four conditions. The United States refers specifically to sections (a) and (c), which identify displacement of imported products and price cutting, respectively, as conditions of serious prejudice caused by India.<sup>92</sup> Given that India

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<sup>89</sup> Request for consultations by the United States, *supra* note 13, at 2.

<sup>90</sup> SCM, *supra* note 40, at art. 5(c).

<sup>91</sup> *Id.* at art. 6.3.

<sup>92</sup> Request for Consultations by the United States, *supra* note 13, at 2.

accounts for ten percent of the United States' exports of solar modules,<sup>93</sup> it would be plausible to assert that a subsidy requiring solar projects not to buy thin-film panels from American manufacturers would cause displacement of American solar products, resulting in serious prejudice.

### C. *India's Response*

India has indicated that it will contest the United States's claim that the domestic requirement violates its trade obligations. Anand Sharma, India's Minister of Commerce and Industry, told then-Secretary of Commerce John Bryson, "We . . . do not view the domestic sourcing clause as violative of WTO rules . . . We have no plan of amending the clause."<sup>94</sup> Specifically, India asserts that the Solar Mission falls under the government procurement exception. Government procurement in international trade means that governments are allowed to procure products exclusively in-country for their own use.<sup>95</sup> GATT Article 8(a) articulates this rule in saying that government agencies can favor domestic goods when purchasing them for "government purposes, and not with a view to commercial resale."<sup>96</sup> The policy of this provision rests on the notion that when a government entity purchases goods for its own use it is not acting as a market regulator, but as a consumer, and therefore should be free to set its own criteria for doing business.

For India, the claim is that the National Thermal Power Corporation ("NTPC"), a state-run power supplier, buys the power from JNNSM solar projects, and the program thus qualifies as government procurement.<sup>97</sup> Therefore the government procurement principle allows India to condition participation in the Solar Mission on using exclusively India-made solar panels.<sup>98</sup> There is a WTO Government Procurement Agreement ("GPA"), in which signees agree to not discriminate between domestic and

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<sup>93</sup> U.S. ENERGY INFO. ADMIN., *supra* note 77, at Table 9.

<sup>94</sup> Amiti Sen, 'Domestic Sourcing for Solar Mission No Violation of WTO Rules', THE ECON. TIMES (Apr. 9, 2012), [http://articles.economictimes.indiatimes.com/2012-04-09/news/31313157\\_1\\_national-solar-mission-solar-power-vidyut-vyapar-nigam](http://articles.economictimes.indiatimes.com/2012-04-09/news/31313157_1_national-solar-mission-solar-power-vidyut-vyapar-nigam), [hereinafter *Domestic Sourcing*], archived at <http://perma.cc/Y8K9-Y8VN>.

<sup>95</sup> Amiti Sen, *India to Defend Local-buy Policy in Solar Mission as US, EU Protest*, THE ECON. TIMES (Feb. 3, 2012), [http://articles.economictimes.indiatimes.com/2012-02-03/news/31021273\\_1\\_solar-mission-trade-related-investment-measures-solar-energy](http://articles.economictimes.indiatimes.com/2012-02-03/news/31021273_1_solar-mission-trade-related-investment-measures-solar-energy), [hereinafter *India to Defend*], archived at <http://perma.cc/U37J-2W43>.

<sup>96</sup> GATT, *supra* note 80, at art. III:8(a).

<sup>97</sup> *Domestic Sourcing*, *supra* note 94.

<sup>98</sup> *India to Defend*, *supra* note 95.



imported products in government procurement. India, however, has not signed the GPA, which is not mandatory for WTO members, and is therefore not bound to abide by it.<sup>99</sup>

### III. UNITED STATES—COUNTERVAILING DUTY MEASURES ON SOLAR PANELS FROM CHINA

#### A. *Department of Commerce's Application of Countervailing Duties*

*US—Countervailing Duty Measures on Certain Products from China* began when SolarWorld Industries America, Inc. filed a petition with the Department of Commerce (“DOC”) on October 19, 2011.<sup>100</sup> The petition asked the International Trade Commission (“ITC”), the branch of DOC that handles the international trade issues of antidumping and countervailing duties,<sup>101</sup> to investigate whether countervailing duties would be appropriate against China’s “unfairly traded” crystalline silicon solar panels.<sup>102</sup> SolarWorld alleged that Chinese manufacturers of solar panels were benefitting from subsidies from the Chinese government, and as a result these subsidies were causing “material injury” to the American solar industry.<sup>103</sup>

The material injury in this instance was a sudden and dramatic increase in solar panel imports from China, from 3.8 million units to 17.4 million units from 2008 to 2010.<sup>104</sup> These importation figures accelerated even further in 2011 with numbers for the first eight months reaching 44.6 million units, and SolarWorld predicted that the total number for the year would reach 66.8 million units.<sup>105</sup> With these figures demonstrating how overwhelmingly Chinese imports were penetrating and surging the United States market for solar panels, SolarWorld asserted that Chinese exporters threatened the domestic solar industry in the United States.<sup>106</sup>

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<sup>99</sup> *Id.*

<sup>100</sup> Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People’s Republic of China: Initiation of Countervailing Duty Investigation, 76 Fed. Reg. 70966 (Nov. 16, 2011).

<sup>101</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 99.

<sup>102</sup> Letter from Timothy C. Brightbill, Gen. Counsel, SolarWorld Indus. Am. Inc., to The Honorable Rebecca M. Blank, Acting Sec’y of Commerce, U.S. Dep’t of Commerce on Petition for the Imposition of Antidumping and Countervailing Duties Against Crystalline Silicon Photovoltaic Cells (Oct. 19, 2011), *available at* [http://www.troutmansanders.com/files/upload/Crystalline\\_Petition\\_Vol1.pdf](http://www.troutmansanders.com/files/upload/Crystalline_Petition_Vol1.pdf), [hereinafter *Petition for Countervailing Duties*].

<sup>103</sup> *Id.* at 25.

<sup>104</sup> *Id.* at 50.

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

This was all under the auspices of section 731 of the Tariff Act of 1930, as amended, codified in 19 U.S.C. § 1673,<sup>107</sup> which states,

If—

- (1) the administering authority determines that a class or kind of foreign merchandise is being, or is likely to be, sold in the United States at less than its fair value, and
- (2) the Commission determines that—
  - (A) an industry in the United States—
    - (i) is materially injured, or
    - (ii) is threatened with material injury, or
  - (B) the establishment of an industry in the United States is materially retarded,

by reason of imports of that merchandise or by reason of sales (or the likelihood of sales) of that merchandise for importation,

then there shall be imposed upon such merchandise an antidumping duty, in addition to any other duty imposed, in an amount equal to the amount by which the normal value exceeds the export price (or the constructed export price) for the merchandise. For purposes of this section and section 1673d (b)(1) of this title, a reference to the sale of foreign merchandise includes the entering into of any leasing arrangement regarding the merchandise that is equivalent to the sale of the merchandise.<sup>108</sup>

In other words, if ITC investigates and discovers that foreign manufacturers are selling their products in the United States for less than the “fair value” of the products, and American manufacturers suffer as a result, then ITC can direct Customs to charge an additional tariff to negate the price difference. This is antidumping, where the motive or the source of the lower prices is not relevant.

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<sup>107</sup> *Id.* at 1.

<sup>108</sup> 19 U.S.C. § 1673.

Furthermore, SolarWorld alleged that Chinese manufacturers of solar panels received subsidies from the Chinese government for exporting their products, in particular by providing raw materials to solar manufacturers for "less than adequate remuneration,"<sup>109</sup> or in other words, at drastically reduced price, possibly for less than cost. SolarWorld listed other subsidies in the petition as well, including preferential loans, export financing, subsidized export insurance, and other potential government directed capital infusions.<sup>110</sup>

The United States government could counteract these subsidies under section 701 of the Tariff Act, codified under 19 U.S.C. § 1671.<sup>111</sup> This section pertains directly to countervailing duties. Subsection (a) of section 701 states:

If—

- (1) the administering authority determines that the government of a country or any public entity within the territory of a country is providing, directly or indirectly, a countervailable subsidy with respect to the manufacture, production, or export of a class or kind of merchandise imported, or sold (or likely to be sold) for importation, into the United States, and
- (2) in the case of merchandise imported from a Subsidies Agreement country, the Commission determines that—
  - (A) an industry in the United States—
    - (i) is materially injured, or
    - (ii) is threatened with material injury, or
  - (B) the establishment of an industry in the United States is materially retarded, by reason of imports of that merchandise or by reason of sales (or the likelihood of sales) of that merchandise for importation, then there shall be imposed upon such merchandise a countervailing duty, in addition to any other duty imposed, equal

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<sup>109</sup> Petition for Countervailing Duties, *supra* note 102, at 45.

<sup>110</sup> *Id.* at 45–46.

<sup>111</sup> *Id.* at 1.

to the amount of the net counter-  
available subsidy.<sup>112</sup>

The language in this provision is very similar to 19 U.S.C. § 1673, except that the cause for the foreign manufacturer's selling exports at lower prices must be due to that manufacturer receiving subsidies from the government.<sup>113</sup> Under § 1671 (2), the country must be a Subsidies Agreement country, otherwise DOC does not need to determine whether any injury to American manufacturers has occurred.<sup>114</sup> The following subsection of 19 U.S.C. § 1671 (b), defines a Subsidy Agreement country, among other possible criteria, as a WTO member.<sup>115</sup>

To return to the wind turbine illustration discussed above, under these statutes, an American manufacturer must petition DOC to determine whether unfair trade practices have taken place in Country A's exportation of wind turbines. To find that dumping has occurred under the Tariff Act section 731, DOC must find that Country A is selling its turbines in the United States for less than "fair value," and that this practice is injuring American wind turbine manufacturers, or likely to injure them. To impose countervailing duties under section 701, DOC must first find that Country A's government gives subsidies to export the wind turbines. Then the question is whether Country A is a Subsidies Agreement country, whether as a WTO member or through some other agreement. If so, then DOC must then determine if Country B's subsidies cause an injury to American manufacturers before imposing additional import duties. If not, DOC does not have to make a determination of the injury to American manufacturers and can levy the countervailing tariff duties without showing injury.

In the present case, the People's Republic of China is a WTO member, having acceded to the organization on December 11, 2001.<sup>116</sup> Therefore, DOC would have to establish that subsidies from the Chinese government to exporters of solar panels caused an injury to American manufacturers before they could impose countervailing duties.<sup>117</sup> And so

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<sup>112</sup> 19 U.S.C. § 1671(a).

<sup>113</sup> 19 U.S.C. § 1673.

<sup>114</sup> 19 U.S.C. § 1671(a),(c).

<sup>115</sup> 19 U.S.C. § 1671(b).

<sup>116</sup> *Understanding the WTO: The Organization Members and Observers*, WORLD TRADE ORG., [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm) (last visited Apr. 1, 2015), archived at <http://perma.cc/ANK5-3WKY>.

<sup>117</sup> Notice of Initiation of Countervailing Duty Investigation, 76 Fed. Reg. 70960, 70968 (Nov. 16, 2011).

on November 8, 2011, the International Trade Commission commenced an investigation into solar cells imported from China for the calendar year 2010.<sup>118</sup> In addition, ITC had consultations with representatives from China to discuss the matter.<sup>119</sup>

The definition for subsidies for the purposes of countervailing duties lies in 19 U.S.C. § 1677, which states:

A subsidy is described in this paragraph in the case in which an authority—

- (i) provides a financial contribution,
- (ii) provides any form of income or price support within the meaning of Article XVI of the GATT 1994, or
- (iii) makes a payment to a funding mechanism to provide a financial contribution, or entrusts or directs a private entity to make a financial contribution, if providing the contribution would normally be vested in the government and the practice does not differ in substance from practices normally followed by governments,

to a person and a benefit is thereby conferred. For purposes of this paragraph and paragraphs (5A) and (5B), the term “authority” means a government of a country or any public entity within the territory of the country.<sup>120</sup>

In addition, § 1677 characterizes providing manufacturers with materials with less than adequate remuneration as a government-provided financial contribution with conferring a benefit.<sup>121</sup> In the case of Chinese solar panels, SolarWorld's petition claimed that the polysilicon industry selling products to solar manufacturers (for less than adequate remuneration) were owned by the Chinese government.<sup>122</sup> DOC then tried to determine whether these polysilicon manufacturers were state-owned. To each manufacturer that the Chinese government claimed was a private entity DOC sent a request for information, including documents that demonstrate the

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<sup>118</sup> Notice of Initiation of Antidumping Duty Investigation, 76 Fed. Reg. 70960 (Nov. 16, 2011).

<sup>119</sup> Notice of Initiation of Countervailing Duty Investigation, *supra* note 117, at 70967.

<sup>120</sup> 19 U.S.C. § 1677(5)(B).

<sup>121</sup> 19 U.S.C. § 1667(5)(D), (E).

<sup>122</sup> Petition for Countervailing Duties, *supra* note 102, at 45.

company's ownership for 2010, identification of the owners' board members, or managers who were also government officials or officers of the Chinese Communist Party, information as to whether the company had ever been a state-owned entity, and information as to whether and how operational or strategic decisions made by the company were subject to government review or approval.<sup>123</sup> The Chinese government was less forthcoming than DOC wanted, and the polysilicon producers provided practically no information as to the extent, past or present, of government control of their respective enterprises.<sup>124</sup>

On March 26, 2012, the International Trade Administration released its preliminary findings.<sup>125</sup> Because the Chinese producers of polysilicon and the government in Beijing did not give DOC the information regarding ownership and control, and according to DOC, "impeded the investigation," DOC had to apply the adverse inference doctrine.<sup>126</sup> In other words, since the Chinese failed (possibly deliberately) to provide the necessary information to prove otherwise, DOC could assume that the polysilicon producers were state-owned and controlled. So they did, holding that the polysilicon manufacturers were "authorities" for the purposes of 19 U.S.C. § 1677.<sup>127</sup>

Furthermore, DOC found that certain solar panel manufacturers in China had also received real estate from the government for less than adequate remuneration.<sup>128</sup> Under § 771(5)(D)(iii) of the Tariff Act, favorable land grants would count as a financial contribution, and thus as a subsidy.<sup>129</sup> The Chinese government claimed that the local authorities, rather than the national government, set the prices of real estate and land rights.<sup>130</sup>

When DOC requested further information from Beijing regarding the processes by which solar manufacturers bought their land, however, the Chinese government provided information for only one parcel of land.<sup>131</sup> Again, DOC determined that the Chinese government failed to cooperate

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<sup>123</sup> Notice of Preliminary Affirmative Countervailing Duty Determination, 77 Fed. Ref. 17439 (Mar. 26, 2012).

<sup>124</sup> *Id.* at 17443.

<sup>125</sup> *Id.* at 17439.

<sup>126</sup> *Id.* at 17444.

<sup>127</sup> *Id.*

<sup>128</sup> *Id.* at 17451.

<sup>129</sup> Notice of Preliminary Affirmative Countervailing Duty Determination, *supra* note 123, at 17451.

<sup>130</sup> *Id.* at 17444.

<sup>131</sup> *Id.*

and provide the necessary information, which was inconsistent with China's past ability to provide similar information in prior cases.<sup>132</sup> Therefore DOC believed that finding an adverse inference was justified, and ruled that the land grants to certain Chinese solar manufacturers were directly tied to their industry, and thus qualified as a countervailable subsidy.<sup>133</sup>

The Chinese government characterizes this procedure in their filing with the WTO as a "rebuttable presumption" established and applied by DOC.<sup>134</sup> It even refers to the Federal Regulations (63 Fed. Reg. 65,348, to be specific) to say that this assessment is a rebuttable presumption.<sup>135</sup> However, the same portion of the Federal Register makes a distinction between "adverse facts available" analyses and "rebuttable presumptions."<sup>136</sup> Nonetheless, the Chinese delegation maintains that this system considers majority government ownership of an enterprise sufficient to determine that an enterprise is a "public body" within the meaning of Article 1.1 of the SCM Agreement.<sup>137</sup>

#### B. *China's Claims*

China claims that DOC's procedure for establishing countervailable duties is inconsistent with a number of the United States' international trade obligations.<sup>138</sup> The first of these is Article VI of the GATT 1994; this is the general provision regarding dumping and countervailing duties. The relevant provision of Article VI for China is the third paragraph, which prohibits countries from charging countervailing duties "in excess of an amount equal to the estimated bounty or subsidy determined to have been granted" to the industry.<sup>139</sup> To determine how DOC's countervailable duties specifically violate Article VI, it would serve to determine how the duties allegedly violate other trade agreements.

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<sup>132</sup> *Id.* at 17444–45.

<sup>133</sup> *Id.* at 17445.

<sup>134</sup> Request for consultation by China, *supra* note 16.

<sup>135</sup> *Id.*

<sup>136</sup> *E.g.*, Dep't of Commerce Int'l Trade of Commerce, 19 C.F.R. pt 351 (1998) ("If a respondent refuses to provide the information requested by the Department to conduct its specificity analysis, we may draw adverse inferences in the application of 'facts available.' . . . However, the use of an adverse inference in these situations is not the same thing as relying on a rebuttable presumption of specificity.").

<sup>137</sup> Request for consultation by China, *supra* note 16, at 2.

<sup>138</sup> *Id.*

<sup>139</sup> GATT, *supra* note 80, at Art. VI:3.

The Chinese delegation then alleged that DOC's measures were inconsistent with the SCM agreement.<sup>140</sup> The focal provisions for the purposes of this Note are in the first two articles, relating to the definition of a subsidy and whether a subsidy is specific to an industry.<sup>141</sup> Article 1 identifies a subsidy where "there is a financial contribution by a government or any public body," including, *inter alia*, when "a government provides goods or services other than general infrastructure, or purchases goods."<sup>142</sup> In particular, China challenges DOC's determination that the goods the Chinese solar manufacturers received, such as polysilicon and real estate, came from a "public body" within the SCM's definition.<sup>143</sup> Specifically, China asserts that DOC "incorrectly determined, or did not have a sufficient basis to determine, that certain [state-owned enterprises] are 'public bodies' within the meaning of" Article 1.<sup>144</sup>

China then looks to Article 2 which provides a method for determination as to whether a subsidy is specific to an industry. The first two subsections of Article 2 concern circumstances where the government directly specifies the industry to which subsidies will go, or specifies criteria which will make industries eligible for the subsidy.<sup>145</sup> Where specific evidence to determine whether these two subsections apply is absent, subsection (c) provides an *attrape-tout* for circumstances that indicate specificity.<sup>146</sup>

DOC did not use any of these criteria in determining specificity with regards to the Chinese solar panels. Having found the Chinese government uncooperative in providing information, DOC had determined specificity through "adverse inference".<sup>147</sup> In claiming that DOC "failed to make a proper determination on the basis of positive evidence" that the alleged subsidies were specific to the Chinese solar industry,<sup>148</sup> the Chinese delegation challenges the use of adverse inference to determine specificity.

The Chinese government then challenged DOC's application of countervailing measures against the Chinese solar industry. Article 10

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<sup>140</sup> Request for consultation by China, *supra* note 16, at 2.

<sup>141</sup> SCM, *supra* note 40, at art. 1.2.

<sup>142</sup> SCM, *supra* note 40, at art. 1.1(a)(1)(iii).

<sup>143</sup> Request for consultation by China, *supra* note 16.

<sup>144</sup> *Id.*

<sup>145</sup> SCM, *supra* note 40, at art. 2(a)–(b).

<sup>146</sup> LAROUSSE FRENCH DICTIONARY, available at <http://translate.google.com/translate?hl=en&sl=fr&u=http://www.larousse.fr/dictionnaires/francais/attrape-tout/6314&prev=search> (last visited Apr. 1, 2015) ("Describes a product that seeks to please the greatest number of consumers."), archived at <http://perma.cc/JZ7K-YDKL>.

<sup>147</sup> SCM, *supra* note 40, at art. 2.1(c).

<sup>148</sup> Notice of Initiation of Countervailing Duty Investigation, *supra* note 117, at 70970.



of the SCM requires that countries impose countervailing duties pursuant to an investigation of countervailable subsidies that conforms to GATT and SCM requirements.<sup>149</sup> It would therefore be China's contention that, in failing to conduct its investigation into Chinese solar panels consistent with its trade obligations, DOC failed to apply countervailing measures in accordance with the SCM.

The Chinese delegation highlights its allegation that DOC has improperly initiated its investigation, looking to Article 11 of the SCM.<sup>150</sup> The delegation specifically looked to sections 1, 2, and 3 of Article 11, to claim that SolarWorld's petition to DOC failed to provide sufficient evidence or facts for DOC to initiate the investigation in Chinese solar panels.<sup>151</sup> Section 1 simply mandates that DOC (or any government body) initiate countervailable subsidy investigations after receiving "a written application by or on behalf of the domestic industry."<sup>152</sup> SolarWorld's petition obviously satisfies the requirement of the first section, so that section alone does not support China's allegations.

However, section 2 provides required elements that the domestic industry (in this case, SolarWorld) must include in its petition.<sup>153</sup> Such elements include, *inter alia*, a "complete description of the allegedly subsidized product" and its country of origin, and evidence of the subsidy and its injury to the domestic industry.<sup>154</sup> Section 3 requires the governing authority (e.g., the U.S. Department of Commerce) to review the evidence provided in the petition to determine if the evidence is accurate and supports initiating an investigation.<sup>155</sup> Again, SolarWorld's petition provides the evidence required by section 2;<sup>156</sup> whether or not the facts and evidence are accurate, the petition satisfies this provision of the SCM. As for DOC's examination of SolarWorld's allegations, it will probably fall to the WTO Dispute Settlement Panel to determine whether they properly followed Article 11.3 of the SCM before initiating their investigation.

The Chinese delegation then looks to section 7 of Article 12 to assert that the DOC has improperly used adverse inference in reaching its determination of subsidies and injury to the domestic solar industry.<sup>157</sup>

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<sup>149</sup> Request for consultation by China, *supra* note 16.

<sup>150</sup> SCM, *supra* note 40, at art. 10.

<sup>151</sup> Request for consultation by China, *supra* note 16, at 2.

<sup>152</sup> *Id.* at 2–3.

<sup>153</sup> SCM, *supra* note 40, at art. 11.1.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at art. 11.3.

<sup>156</sup> Petition for Countervailing Duties, *supra* note 102, at i–iii.

<sup>157</sup> Request for consultation by China, *supra* note 16, at 4.

Article 12.7 states that, when a country investigating dumping or countervailable subsidies requests information from “any interested Member [i.e., country] or interested party [i.e., exporter or supplier to exporters],” and those entities refuse or otherwise fail to provide the requested information, the investigating country may proceed and base its determinations on “facts available.”<sup>158</sup> The language of this provision specifically allows a government authority like DOC to use “facts available” when parties like the Chinese government fail to provide the necessary information to determine whether or not unfair trading practices have taken place. The Chinese delegation most likely distinguishes “facts available” from “adverse inference” as DOC uses the term, as this Note will discuss in the section predicting the outcome of these trade disputes.

Finally, the Chinese delegation refers to several articles of the SCM, as well as the *Protocol on the Accession of the People’s Republic of China*, to assert that DOC used improper methods to determine the amount of the alleged subsidy and thus to impose its countervailing tariff.<sup>159</sup> These articles include Articles 14 and 32 of the SCM, and Article 15 of the Protocol.<sup>160</sup> The Protocol is the document by which China joined the WTO on December 11, 2001.<sup>161</sup> As this Note prefers to focus on the allegations that DOC improperly used adverse inference to determine that countervailable subsidies had taken place, the description of calculating subsidies will be as brief as possible.

Article 14 states, in relevant part, that government provision of goods does not constitute a subsidy unless the government furnished them “less than adequate remuneration.”<sup>162</sup> The provision does not specify what adequate remuneration is, but does require that the deciding governing body base that determination “in relation to prevailing market conditions for the good or service in question in the country of provision.”<sup>163</sup> In other words, the body investigating alleged subsidies must compare the price paid by the manufacturer to the government for the goods to the price those goods normally have in that country at the time the manufacturer received them.

In *US—Countervailing Duty Measures on Certain Products from China*, the case is more complicated in that China has special circumstance

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<sup>158</sup> SCM, *supra* note 40, at art. 12.7.

<sup>159</sup> Request for consultation by China, *supra* note 16, at 2.

<sup>160</sup> *Id.*

<sup>161</sup> WORLD TRADE ORG., *China and the WTO: Member information*, [http://www.wto.org/english/thewto\\_e/countries\\_e/china\\_e.htm](http://www.wto.org/english/thewto_e/countries_e/china_e.htm), archived at <http://perma.cc/QLL6-2X48>.

<sup>162</sup> See SCM, *supra* note 40, at art. 14(d).

<sup>163</sup> *Id.*

when determining the domestic price of goods. As a non-market economy (i.e., communist), the WTO recognizes that China might artificially set the domestic prices for goods such as polysilicon glass.<sup>164</sup> As such, Article 15 of the Protocol on the Accession of the People's Republic of China provides special conditions for price comparison. When comparing prices of Chinese goods, a governing body like DOC can either use the actual price in China, or an alternative basis that "is not based on a strict comparison with domestic prices or costs in China."<sup>165</sup> Generally, the governing body must use the actual price in China if the interested manufacturers can show that the price of the goods in China actually reflect the market, and may use an alternate method if the producer cannot show that Chinese prices are based on market conditions.<sup>166</sup> China's contention in *US—Countervailing Duty Measures on Certain Products from China* is that DOC failed to act in accordance with these provisions in the SCM and the Protocol to determine that Chinese solar industries received polysilicon glass for less than adequate remuneration.<sup>167</sup>

#### IV. PREDICTIONS OF THE OUTCOMES

##### A. *India—Certain Measures Relating to Solar Cells and Solar Modules*

There are numerous factors to consider when predicting the outcome of *India—Certain Measures Relating to Solar Cells and Solar Modules*. To establish a *prima facie* case against India, the United States will have to demonstrate that its allegations in its Request for Consultations are factual. Specifically, the United States will have to prove that the JNNSM afford imported solar cells and solar modules less favorable treatment than to those manufactured in India, specifically by providing grants contingent upon the use of Indian solar panels.<sup>168</sup> These allegations should not prove difficult to establish, as India apparently stipulates to their accuracy.

India can stipulate to the United States' *prima facie* case, because they claim to be exempt under the government procurement exception.<sup>169</sup>

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<sup>164</sup> See WORLD TRADE ORG., *Technical Information on Anti-Dumping*, [http://www.wto.org/english/tratop\\_e/adp\\_e/adp\\_info\\_e.htm](http://www.wto.org/english/tratop_e/adp_e/adp_info_e.htm), archived at <http://perma.cc/93LK-Y5K8>.

<sup>165</sup> Protocol on the Accession of the People's Republic of China, WT/L/432, art. 15 (Nov. 23, 2001).

<sup>166</sup> *Id.*

<sup>167</sup> See Request for consultation by China, *supra* note 16, at 2.

<sup>168</sup> See Request for Consultations by the United States, *supra* note 13, at 48.

<sup>169</sup> See Sen, *India to Defend*, *supra* note 95.

Again, this is on the grounds that NTPC, which purchases the solar power from approved projects, is a state-owned company.<sup>170</sup> The dispositive question then appears to be whether India can properly claim that government procurement permits the program as it stands.

The best method for predicting the outcome of this case, as well as that of *US—Countervailing Duty Measures on Certain Products from China*, is to consult prior WTO dispute resolution reports. *Canada—Measures Relating to the Feed—In Tariff Program* (DS426) is a case that would be very helpful for predicting how a panel would rule on India’s JNNSM, for two reasons. First, the appellate body issued its report on the case in May of 2013,<sup>171</sup> so it is sufficiently recent to gauge the current attitudes toward national treatment and government procurement. Second, the facts of the Canadian case correlate fairly well to the facts in *India—Certain Measures Relating to Solar Cells and Solar Modules*.

Canada had initiated a feed-in tariff (“FIT”) program to implement the Green Energy and Green Economy Act of 2009.<sup>172</sup> In general terms, the FIT program had the Ontario Power Authority, a state-run power company, contract with generators of wind and solar electricity to buy electricity at an above-market price fixed for twenty years.<sup>173</sup> Like the JNNSM, the Canadian FIT program required that contracting suppliers acquire their green generating equipment from Canadian manufacturers.<sup>174</sup>

Japan and the European Community (“EC”) challenged this program as inconsistent with Canada’s trade obligations.<sup>175</sup> Canada cited Article III:8(a) to claim that the FIT program was exempt from national treatment as a procurement by a government agency.<sup>176</sup> The initial panel concluded that Canada’s FIT program concerned the government procurement of electricity, and therefore Canada could use Article III:8(a) as a

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<sup>170</sup> *Id.*

<sup>171</sup> *Relating to the Feed—In Tariff Program*, WT/DS426/AB/R (May 6, 2013), [hereinafter Appellate Report-Canada].

<sup>172</sup> Kenina Lee, *An Inherent Conflict Between WTO Law and A Sustainable Future? Evaluating the Consistency of Canadian and Chinese Renewable Energy Policies with WTO Trade Law*, 24 GEO. INT’L ENVTL. L. REV. 57, 59 (2011).

<sup>173</sup> Andrew Shoyer & Rajib Pal, *Government Support For Green Energy: Is WTO Decision a Game-Changer?*, WHO’S WHOLEGAL, 1 (Dec. 2013), available at <http://whoswholegal.com/news/features/article/30990/>, archived at <http://perma.cc/FA4Q-KX4S>.

<sup>174</sup> *Id.*

<sup>175</sup> Panel Report, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WT/DS426/R, 5–6 (Dec. 19, 2012).

<sup>176</sup> *Id.* at 56.

defense.<sup>177</sup> The panel found, however, that the program was inconsistent with other trade obligations.<sup>178</sup>

Canada, Japan, and the European Commission appealed the decision to the Appellate Panel, which reviewed the FIT program under the government procurement doctrine. The Appellate Panel found that the FIT Program and related FIT contracts were not exempt under the government procurement exemption in Article III:8(a) of the GATT. The reason was that the Minimum Domestic Content Requirement, which applied to private electricity generators, was too attenuated from the supposedly permissible “government procurement” of electricity by the Canadian government.<sup>179</sup> To clarify, even if the Canadian government were buying the electricity for its own use, there is no sufficient link between buying electricity and requiring the third-party providers to use Canadian-made equipment.

For *India—Certain Measures Relating to Solar Cells and Solar Modules*, this indicates that the dispute panel would likely find the JNNSM not to be exempt from national treatment under Article III:8(a). First, India would have to contend with the provision that the government procurement not be with the intent to resell the power they acquire from solar programs.<sup>180</sup> As NTPC Limited is a major supplier of India’s power, presumably to the general public as well as to the government,<sup>181</sup> the Panel would likely hold that the purpose of the Indian government buying the electricity was to resell it. Moreover, if the Panel did not consider the procurement as a reselling of the electricity, the Panel would likely hold that the minimum domestic content provisions for private solar energy suppliers was not sufficiently connected to government purchasing of electricity, as was the case in Canada. For the purposes of green energy policy, there is therefore no justification for requiring domestic panels if the solar projects can acquire efficient units cheaply for foreign manufacturers.

## B. *China*

In *US—Countervailing Duty Measures on Certain Products from China*, the dispositive question, at least for the purposes of this Note, is

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<sup>177</sup> *Id.* at 75.

<sup>178</sup> *Id.* at 139.

<sup>179</sup> Appellate Report-Canada, *supra* note 171, at 150.

<sup>180</sup> GATT, *supra* note 80, at art. III:8(a).

<sup>181</sup> NTPC, *Overview*, [http://www.ntpc.co.in/index.php?option=com\\_content&view=article&id=42&Itemid=75&lang=en](http://www.ntpc.co.in/index.php?option=com_content&view=article&id=42&Itemid=75&lang=en), archived at <http://perma.cc/LH5Y-JDHB>.

whether DOC's use of adverse inference in making its preliminary determinations was consistent with the United States' trade obligations. To that end, *United States—Antidumping Measures on Certain Hot-Rolled Steel Products from Japan* would be a helpful case to gauge the WTO's attitude toward "adverse facts available," the term used by the Panel which is fairly synonymous with DOC's "adverse inference". Granted, *US—Antidumping Measures* is an older case, handed down in 2001,<sup>182</sup> and does not deal directly with countervailing duties. It does, however, pertain to dumping, which, as explained above, is closely related to countervailable subsidies on exports. Moreover, *US—Antidumping Measures* concerns DOC's methodology, and can prove useful in guessing how a dispute panel would address DOC's methods for imposing countervailing tariffs against China.

In *United States—Antidumping Measures on Certain Hot-Rolled Steel Products from Japan*, DOC suspected that Japanese manufacturers of hot-rolled steel, specifically Kawasaki Steel Corporation ("KSC"), Nippon Steel Corporation ("NSC"), and NKK Corporation ("NKK"), were dumping their products on the American market.<sup>183</sup> As part of its investigation, DOC asked KSC to provide the prices at which its American buyer resold its products.<sup>184</sup> Despite KSC's willingness to comply, the American buyer refused to furnish that information to KSC.<sup>185</sup>

KSC had the contractual right to compel its buyer to provide the information, but chose not to exercise it.<sup>186</sup> Nor did DOC take affirmative steps to aid KSC in getting the information.<sup>187</sup> Without this information, DOC determined that KSC was not "fully cooperative and made every effort to obtain and provide the information."<sup>188</sup> The eventual Appellate Panel at the WTO held that DOC was unreasonable in expecting KSC to exhaust *all* measure to obtain the information, without offering any help on its part to obtain it directly from the importer.<sup>189</sup> While DOC lost in that case, it does not mean that DOC cannot use adverse facts available at all. It would appear that, at a minimum, the WTO requires reasonable accommodation on the part of an investigating authority like DOC before they can resort to "adverse facts available."

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<sup>182</sup> See Appellate Report, *United States—Antidumping Measures on Certain Hot-Rolled Steel Products from Japan*, WT/DS184/AB/R (July 24, 2001).

<sup>183</sup> *Id.* at 1.

<sup>184</sup> *Id.* at 35.

<sup>185</sup> *Id.* at 36.

<sup>186</sup> *Id.*

<sup>187</sup> *Id.*

<sup>188</sup> Appellate Report, *supra* note 171, at 36 (citing Fed. Reg. 24329, 24368 (May 6, 1999)).

<sup>189</sup> *Id.* at 41.

The facts in *United States—Antidumping Measures on Certain Hot-Rolled Steel Products from Japan* concerning KSC, however, contrast those of the Chinese solar manufacturers. In its initial investigation, DOC granted at least seven extensions to the Chinese solar manufacturers, as well as to the Chinese government, with regard to filing responses to DOC's questionnaire.<sup>190</sup> It would therefore appear that DOC was very accommodating in requesting information from the Chinese parties. Moreover, there is no material in the Federal Record to indicate that these parties faced any difficulties in locating or obtaining the requested information, other than China's assertion that no centralized database existed that stored the information.<sup>191</sup> On the contrary, the Chinese government did not indicate at all what steps it had taken to find the information.<sup>192</sup> Given DOC's accommodations to the Chinese parties, along with China's failure to even indicate that it had taken reasonable steps to obtain the requested information, the WTO dispute panel could find that the use of adverse inference on the part of DOC was reasonable.

This question of using adverse inference or adverse facts available may not be dispositive in this case as a whole. *US—Countervailing Duty Measures on Certain Products from China* involves many issues, including calculation of subsidies and the final investigation and determination that DOC promulgated in December of 2012.<sup>193</sup> This one issue of adverse inference, however, illustrates the variety of problems that face international trade, and by extension the market for green technology.

## CONCLUSION

After this exhausting, if not exhaustive, look at the WTO dispute process and these two cases, this Note finally turns to an important question: why does all this domestic-content and countervailing duties nonsense matter for environmental policy? On the face of it, the interests of international trade do not run parallel to the interest of environmental policy.

In fact, there is at least one voice that claims that international trade law conflicts with environmental policy. Kenina Lee, in her article *An Inherent Conflict Between WTO Law and a Sustainable Future? Evaluating the Consistency of Canadian and Chinese Renewable Energy Policies with*

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<sup>190</sup> 77 F.R. 17439, 17740 (Mar. 26, 2012).

<sup>191</sup> *Id.* at 17743.

<sup>192</sup> *Id.*

<sup>193</sup> See generally *Crystalline Silicon Photovoltaic Cells, Whether or Not Assembled Into Modules, From the People's Republic of China: Countervailing Duty Order*, 77 Fed. Reg. 73017 (Dec. 7, 2012).

*WTO Trade Law*, asserts that those interested in global climate policy should look to multilateral agreements such as Kyoto Protocol and United Nations Framework Convention on Climate Change, rather than to the WTO and GATT.<sup>194</sup> Looking to *Canada—Measures Relating to the Feed-In Tariff Program*, which she discussed in great detail and (correctly) predicted the outcome, Lee maintains that WTO decisions prohibiting domestic content requirements impedes government programs to increase renewable energy output, such as Canada's FIT program,<sup>195</sup> or (by extension) India's JNNSM. However, she derives this inference from the assumption that the domestic content requirements provide some environmental benefit, as she believes that the cost of producing renewable energy will progressively decline from economies of scale.<sup>196</sup> The point she misses is that the cost decreases because of, rather than in spite of, international trade.

While it is true that a ruling against India will require a revision of the Solar Mission, there is scarce evidence that it will make its implementation more difficult or expensive. On the contrary, the opposite is likely true. If Indian solar panels are truly competitive in the global market, in quality and price, then a domestic content requirement would be unnecessary. If, on the other hand, the Indian solar industry is fledgling and cannot produce the required panels cheaply or efficiently, then a domestic content requirement could threaten the efficacy of the entire Mission.

The same applies for the case of *US—Countervailing Duty Measures on Certain Products from China*. As stated above, many factors could allow the WTO panel to rule for or against the United States. However, a decision in favor of DOC would not necessarily equate to a victory for American solar power. Certain members of the American solar industry oppose SolarWorld's petition to DOC as "protectionist," threatening the industry as a whole.<sup>197</sup> Whether DOC's measures against Chinese solar panels are protectionist, or legitimately aimed to curtail unfair trade practices by the Chinese, is best left to a panel in the WTO, whose only interest is free and open commerce.

If the WTO panel determines that the influx of cheap Chinese solar panels is due to China's staggering capacity for manufacturing and not

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<sup>194</sup> Kenina Lee, *An Inherent Conflict Between WTO Law and A Sustainable Future? Evaluating the Consistency of Canadian and Chinese Renewable Energy Policies with WTO Trade Law*, 24 GEO. INT'L ENVTL. L. REV. 57, 91 (2011).

<sup>195</sup> *Id.* at 86.

<sup>196</sup> *Id.* at 86–87.

<sup>197</sup> See COALITION FOR AFFORDABLE SOLAR ENERGY, *What is the Coalition for Affordable Solar Energy?* (2014), <http://www.affordablesolarusa.org/about/>, archived at <http://perma.cc/VKB8-5HWT>.



from unfair dumping or prohibited government subsidies, China should then be free to out-compete American solar manufacturers. The lesson then for China in this matter would be to cooperate with DOC and save both governments the trouble of turning to the WTO.

If, however, China's trade in solar panels is bolstered by unfair trade practices (dumping or subsidies) then the WTO should make them stop. Otherwise they will drive the domestic solar industries out of business.<sup>198</sup> If they did so, the Chinese would then control the market for solar panels, and be free to raise the prices or lower the quality, as there would be no competitor to challenge them.<sup>199</sup> That, in turn, would reduce the cost-effectiveness of green energy.

The best, if not only, way to ensure that solar energy can seriously contend with fossil fuel-derived energy is to make it so that solar technology is affordable, ideally at the lowest price possible. This is already a challenge, as solar energy currently costs between three to six times more to produce than energy from conventional sources.<sup>200</sup>

WTO trade obligations, as expressed in agreements such as the GATT and the SCM, ensure that countries will not give an unfair advantage to their respective solar industries by freezing out foreign solar products, nor distort the market by granting unnecessary subsidies.<sup>201</sup> This makes for a global free market, which in turn means the lowest prices.<sup>202</sup> In other words, those countries able to efficiently produce the best solar components can do so unimpeded and reap the financial benefits, while those countries that cannot can acquire solar technology elsewhere at the lowest cost possible and reap the environmental benefits. In the end, the whole world wins, both economically and environmentally.

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<sup>198</sup> INTERNATIONAL TRADE LAW, *supra* note 20, at 445.

<sup>199</sup> *Id.*

<sup>200</sup> NAT'L ACAD. ENG'G, *Make solar energy economical*, NAE Grand Challenges for Engineering (2012), <http://www.engineeringchallenges.org/cms/8996/9082.aspx>, *archived at* <http://perma.cc/XK8E-87B9>.

<sup>201</sup> WORLD TRADE ORG., *Understanding the WTO: What We Stand For*, [http://www.wto.org/english/thewto\\_e/whatis\\_e/what\\_stand\\_for\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/what_stand_for_e.htm), *archived at* <http://perma.cc/3GQ9-6XC3>.

<sup>202</sup> *Id.*