

# **Trade Remedies in Renewable Energy: A Global Survey**

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# Procedures for anti-dumping (AD) and countervailing duties (CVD)

- AD and CVD penalties can be levied on imports if it is proven that the domestic industry suffers “material injury” from dumping, i.e., products sold at “less than fair value,” or from subsidies that provide unfair advantages to foreign firms.
- Penalties are intended to offset the margin of dumping or subsidization.
- Initially are not to exceed 5 years, but can be extended following a “sunset review.”
- New users account for the substantial growth in recent trade remedy cases: dev. countries more than doubled their use of trade remedies between 2004-11.

# Takeaways from the economic literature

- Basic economic analysis treats trade remedies similar to tariffs, with well-known effects.
- The direct effect is to reduce imports by raising prices.
- Trade remedies can lead to trade diversion both on bilateral imports directly and through spillover channels.
- “Strategic dumping” can promote collusion between firms and may achieve economies of scale.
- Retaliatory motives may prompt complaints against countries that instigated past investigations.
- **Main takeaway: Motive of trade remedies no longer simply about correcting for “unfair” trade practices, but about broad protection of domestic firms.**

# Concerns regarding trade remedies targeting renewable energy (RE)

1. Higher prices for green products will lead to less accessibility for user industries and consumers;
2. Higher price of renewable electricity could erode competitiveness with fossil fuels;
3. Raised costs of intermediate inputs will affect downstream firms in the supply chain, undermining “supply chain optimization”;
4. Retaliatory behavior will increase among targeted countries.

# Survey of trade remedies in RE sector

- **Global survey:** identified AD and CVD cases in the RE sector from 2008 through early 2014, based on data from (1) Temporary Trade Barriers database created by Chad Bown at the World Bank; and (2) official government sources.
- **Identification:** AD/CVD cases specify 8- or 10-digit HTS product level, which as a rule can be identified as RE products.
- **Recorded 41 cases:** 26 anti-dumping cases & 15 parallel subsidy investigations.
- **Six countries pursued renewable investigations:** Australia, China, the EU, India, Peru, and the US.
- **Products targeted:** 18 cases targeted solar energy products; 16 cases biofuels; and 7 cases wind energy products.

# Countries that impose trade remedies targeting renewable energy products

Country	GDP, 2012 (US \$ billions)	Renewable electricity net generation, 2012 (TWh) <sup>a</sup>	AD cases		CVD cases		Total imports affected for 41 cases in renewables (US\$ millions) <sup>c</sup>
			Cases targeting RE since 2008	Total cases (2008-12) <sup>b</sup>	Cases targeting RE since 2008	Total cases (2008-12) <sup>b</sup>	
Australia	1,532	29	3	49	1	7	456
China	8,227	797	3	53	2	6	2,144
EU	16,687	684	10	75	8	21	24,408
India	1,842	162	4	167	0	0	502
Peru	204	22	1	10	1	7	40
US	16,245	508	5	68	3	44	4,414
<b>Total</b>	n.a.	n.a.	<b>26</b>	422	<b>15</b>	85	<b>31,965</b>

n.a. = not applicable; TWh = terawatt hours; RE = renewable energy

<sup>a</sup> Data for China and India from 2011; EU data from 2010; all other data from 2012.

<sup>b</sup> The total number of AD and CVD cases is through year-end 2012.

<sup>c</sup> Calculated as average imports from 2009 through year measure imposed; trade based on HTS codes identified in AD/CVD case.

Sources: World Bank, WDI Database; US Energy Information Administration; AD/CVD cases from Bown (2012a) and (2012b); total imports affected from authors' calculations.

# Estimated trade reduced from AD/CVD cases

- The simple average of dumping and subsidy *ad valorem* duties is 27% and 26%, respectively. For cases with parallel AD/CVD investigations, the total combined penalties averaged 59%.
- For cases with specific duties (e.g., based on weight or volume) we use the calculated margins or estimate AV equivalents.
- To estimate the reduction of trade in RE products, we assume an elasticity of import demand of -1.0 (i.e., a 1% increase in price of the good results in a 1% decrease in the quantity imported).
- We estimate total reduction of trade to be about **\$14 billion annually**.
- As AD and CVD penalties are effective for 5 years, this translates to global trade loss of **\$68 billion over 5 years**.

# Estimated RE trade reduced by country

Complainant country	Value of imports from respondent country (US\$ millions)											Total trade
	ARG	CAN	CHN	EU	INDO	KOR	MYS	SGP	TWN	US	VTN	
Australia	0	0	70	0	0	2	0	0	0	9	0	80
China	0	0	0	406	0	83	0	0	0	464	0	953
EU	347	441	4,427	0	164	0	0	0	0	2,626	0	<b>8,004</b>
India	0	0	66	0	0	0	19	0	25	21	0	132
Peru	0	0	0	0	0	0	0	0	0	19	0	19
United States	0	0	4,128	0	0	0	0	0	222	0	46	<b>4,396</b>
<b>Total trade</b>	347	441	<b>8,692</b>	406	164	85	19	0	246	<b>3,138</b>	46	<b>13,584</b>

Note: All initiated AD/CVD cases are included regardless of the outcome, i.e., whether ruled affirmative, negative, or withdrawn.

Source: Authors' calculations.



# Products targeted in AD/CVD investigations

Renewable energy product	Number of AD/CVD cases	Total trade affected		Estimated trade reduced		Global trade in targeted renewable energy products (US\$ billions) <sup>a</sup>
		Value (US\$ millions)	% of total global trade	Value (US\$ millions)	% of total global trade	
<b>Biofuels</b>	16	9,404	3.6	3,605	1.4	259
<b>Solar energy</b>						
cSi PV cells & modules	11	19,230	21.7	<b>8,549</b>	<b>9.6</b>	89
Solar grade polysilicon	5	2,144	29.5	<b>953</b>	<b>12.0</b>	7
Solar glass	2	146	6.8	<b>61</b>	<b>2.8</b>	2
<b>Wind energy</b>						
Glass fiber products	2	238	3.2	24	0.3	7
Wind turbines	5	804	8.3	393	4.1	10
<b>Total</b>	<b>41</b>	<b>31,965</b>	<b>8.5</b>	<b>13,584</b>	<b>3.6</b>	<b>374</b>

<sup>a</sup> Total global trade estimated based on the 6-digit HS codes that correspond to the HTS codes specified in each AD/CVD case. Global trade calculated as average imports of specified products in recent years, 2009 to 2012. Because 6-digit HS codes include some unrelated products this is an imprecise overestimate of actual global trade in the specified RE products. Identification of which 6-digit HS codes to draw on from the AD/CVD cases relied on authors' judgment.

Sources: authors' calculations; global trade from World Bank WITS database.

# WTO cases targeting RE

- The number of AD/CVD cases far outnumbers the handful of WTO disputes.
- Trade remedies “offer a much faster, direct, and politically popular means of response to unfair industrial policies compared to WTO disputes” (Wu and Salzman 2013).
- But nearly a dozen WTO cases have been pursued since 2010.
- Two disputes relate to the proceedings of trade remedy cases (Argentina vs. EU and China vs. US)
- Many cases have not proceeded to the WTO panel stage, but their outcomes will have implications for parallel AD/CVD investigations.

# Status of US-China trade frictions

## United States

- In Dec 2012, US levied duties on solar cell & module imports from China ranging 18.3%-249.9% (AD) and 14-15.24% (CVD).
- In Dec 2013, US levied duties on wind tower imports from China ranging 45.9%-70.6% (AD) and 28.34% (CVD).
- In 2014, US began new investigations on solar imports from Taiwan and China. The Dept. of Commerce postponed the AD determination, but issued CV duties on Chinese imports ranging 18.56%-35.2%.

## China

- In Jan 2014, China levied duties on solar-grade polysilicon imports from US, ranging 53.3-57% (AD) and 2.1% (CVD).
- In 2012, China challenged US trade remedy procedures in the WTO regarding (1) treatment as a non-market economy; and (2) US failure to investigate the use of “double remedies.” In March 2014, WTO ruled US was in violation of the SCM Agreement.

# Status of EU-China trade frictions

## European Union

- In Nov 2013, EU levied AD duties ranging 38.4%-42.1% on solar glass imports from China.
- In Dec 2013, EU-China reached a price undertaking (PU) deal regarding solar cells & module imports from China. The deal established a EUR 0.56/watt minimum import price; or duties ranging 47.7%-64.9% (AD) and 11.5% (CVD).
- On June 12, 2014, EU solar panel manufacturers charged that Chinese companies are violating the terms of PU deal.

## China

- On April 30, 2014, China levied duties on solar grade polysilicon imports from EU ranging 14.3-42% (AD), but reached a price agreement with Germany company, Wacker Chemie AG.

# Policy recommendations

- We estimate \$14 billion of trade in RE products is lost annually, and about \$68 billion over 5 years, with concentrated effects on solar energy products.
- AD/CVD cases targeting RE products have greatly expanded in the past five years; this trend will likely continue.
- AD/CVD penalties against foreign companies increases “tit-for-tat” trade disputes in RE.
- But a complete “carve-out” for environmental policies is not politically feasible at this juncture in trade policy.
- Promising reforms for trade remedies targeting RE include: (1) the lesser duty rule and shorter time limits; (2) a public interest test, by way of obligatory disclosure, but not as a barrier to AD/CVD cases.