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This article examines the issue of climate change policy and international trade law. While conventional wisdom may have predicted that conflicts in trade law would emerge through climate-related protectionist measures, such as carbon tariffs on imports from countries with less stringent controls on greenhouse gas emissions, the authors point out that government support for climate-friendly technologies has in fact emerged as the primary battleground. The authors examine two recent disputes—between the United States and China and between Japan and Canada—over green subsidies and their implications for the future of clean energy.

Climate Change and the WTO: Expected Battlegrounds, Surprising Battles

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Climate change is poised to become the next big thing in international trade law, but not for the reason most experts have long predicted. The much-ballyhooed “border carbon adjustment,” a controversial tariff imposed on imports to level the playing field between trading partners with strong climate regulations and those without, has yet to be employed anywhere in the world. Meanwhile, clean energy subsidies have already generated World Trade Organization (WTO) disputes, the resolution of which likely will shape important features of international climate policy and the world trading system for years to come.

Contrary to conventional wisdom, then, it is not climate-related protectionism but rather government support for climate-friendly technology that has come into conflict with international trade law. This article identifies the reasons why protectionism has yielded to subsidies as the primary climate change battleground at the WTO, and examines the key issues in two recently

initiated trade disputes with potentially enormous ramifications for the future of clean energy.

Climate-Related Protectionism: The Dog That Didn't Bite

For years, climate and trade law experts have been worried that taxes on carbon dioxide emissions and cap-and-trade rules might generate international disputes at the WTO or, worse, outright trade wars between the world's leaders and laggards in climate regulation.¹ Because a lack of greenhouse gas emissions controls can, like an artificially deflated currency, make one country's exports cheaper vis-à-vis a trading partner that has its own domestic climate regulations, some price adjustment at the border may be deemed necessary to level the playing field. The idea is that by using a tariff to "adjust" the price of imported goods, known as a border carbon adjustment (BCA), a country with an emissions cap or carbon tax would be able to prevent a flood of cheap, carbon-intense imports from displacing domestic production, eroding its terms of trade, and undoing the effectiveness of its climate regulations through so-called "carbon leakage."² A crude BCA measure featured prominently in the failed Waxman-Markey climate legislation passed by the U.S. House of Representatives in June 2009.³ Likewise, although not implemented, proposals for BCAs in Europe and Australia have gained support among particularly trade-exposed interest groups.⁴

But, the argument goes, the failure by a climate laggard, such as the United States,⁵ to regulate greenhouse gas emissions across its entire economy creates an un-

fair cost differential across practically all categories of imports to a climate leader, such as the European Union,⁶ from steel and concrete to high-tech consumer goods. Unless crafted with exceeding specificity, a BCA could thus apply to a wide swath of imported products.⁷ For this reason, many experts worry that the unilateral imposition of BCAs might spark escalating trade wars by disguising crass protectionism beneath a thin veneer of climate-friendly rhetoric.⁸ Although the WTO itself has confirmed the potential legality of at least some BCA measures,⁹ the potential for abuse remains, especially since political realities likely will hamstring policymakers who seek to ensure that narrow BCA measures comply with the requirements imposed by international trade law.

Nevertheless, it is important to recall that much of the distress about climate-related protectionism has been driven by expectations about two eventualities that have yet to come to pass: the conclusion of a binding international treaty to succeed the Kyoto Protocol after its first commitment period expires in 2012, and the passage by the U.S. Congress of comprehensive climate change legislation.

Had the United States and other developed countries joined Europe in embracing binding caps on greenhouse gas emissions, the need to strike the right balance between climate change mitigation and industrial competitiveness would have almost certainly led to the embrace of BCAs in one form or another. Indeed, as noted above, powerful trade-exposed interest groups secured a broad BCA provision in the Waxman-Markey legislation passed by the House in advance of the 2009 climate change summit in Copenhagen,¹⁰ and inserted a comparable measure in at least one of the companion climate bills introduced in the Senate that same year.¹¹

¹ See, e.g., Ben Lockwood and John Whalley, *Carbon-motivated Border Tax Adjustments: Old Wine in Green Bottles?*, 33 *WORLD ECON.* 810 (2010); Alexandra Khrebtukova, *Using National Border Climate Adjustment Schemes to Facilitate Global Greenhouse Gas Management in Industrial Production*, 1 *WASH. & LEE J. ENERGY, CLIMATE & ENVI.* 107 (2010); Arvind Subramanian, et al., *Reconciling Climate Change and Trade Policy*, PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS WORKING PAPER No. 09-15, (December 10, 2009); Christian Pitschas, *GATT/WTO Rules for Border Tax Adjustment and the Proposed European Directive Introducing a Tax on Carbon Dioxide Emissions and Energy*, 24 *GA. J. INT'L & COMP. L.* 479 (1995).

² See Francesco Sindico, *The EU and Carbon Leakage: How to Reconcile Border Adjustments with the WTO?*, 17 *EUR. ENERGY & ENV'L. L. REV.* 328 (2008).

³ See American Clean Energy and Security Act (ACESA), H.R. 2454, 111th Cong. (2009) §§ 766-67.

⁴ See, e.g., E.U. Commission, Draft Directive amending Directive 2003/87/EC – Future Allowance Import Requirement (FAIR); Svetlana German, "Climate Change Legislation in Australia: Trade Exposed Industries Mounting a Strong Resistance," Columbia Center for Climate Change Law, Columbia Law School, May 3, 2011, <http://blogs.law.columbia.edu/climatechange/2011/05/03/climate-change-legislation-in-australia-trade-exposed-industries-mounting-a-strong-resistance>.

⁵ The United States remains one of the world's highest emitters of greenhouse gases on a per capita basis and is the second highest emitter on an aggregate basis, after China, but has thus far failed to implement a comprehensive regulatory scheme to curb emissions. See Fiona Harvey, "Ailing UN climate talks jolted by record surge in greenhouse gases," *THE GUARDIAN* (U.K.), May 29, 2011 ("While the EU is on track to meet its [Kyoto Protocol] commitments, other countries are

not and some – including the US, which opposes Kyoto – would prefer to discuss a replacement.").

⁶ *Id.*

⁷ This analysis ignores the possibility of a sectoral approach to greenhouse gas regulation, as appears to be taking shape in China. Indeed, a rough version of sectoral greenhouse gas permitting was included as part of the Chinese government's 12th Five-Year Plan. See Deborah Seligsohn and Angel Tsu, "How Does China's 12th Five-Year Plan Address Energy and the Environment?," World Resources Institute, March 7, 2011, <http://www.wri.org/stories/2011/03/how-does-chinas-12th-five-year-plan-address-energy-and-environment>.

⁸ See "Obama Criticises Border Tax Adjustments in House Climate Bill," International Centre for Trade & Sustainable Development, July 1, 2009, <http://ictsd.org/i/news/bridgesweekly/49962>.

⁹ In a joint report published with the United Nations Environment Program in July 2009, the WTO stated unequivocally that at least certain types of climate-motivated border adjustments could pass muster under relevant trade law rules. See World Trade Organization, Press Release, "WTO and UNEP Launch a Report Explaining for the First Time the Connections Between Trade and Climate Change," June 26, 2009, http://www.wto.org/english/news_e/pres09_e/pr559_e.htm. Furthermore, some scholars have argued persuasively that reformatting BCAs so that they are origin-neutral and assessed at the point of market access would not only help to avoid trade law problems but might also incentivize rapid development of new forms of international climate collaboration. See, e.g., Khrebtukova, *supra* note 1.

¹⁰ See ACESA §§ 766-67, *supra* note 3.

¹¹ See American Power Act, Discussion Draft, 111th Cong. (2010), §§ 776-77, available at <http://kerry.senate.gov/imo/media/doc/APAbill3.pdf>.

But without federal climate legislation driving up the cost of greenhouse gas emissions, U.S. policymakers have less reason to worry about the international competitiveness of high-emitting domestic industries.¹² And Europeans have by and large forsworn BCAs, recognizing that, at least for now, the risks of a nasty trade war outweigh the benefits.¹³

China, meanwhile, is moving ahead with a variety of climate and energy measures under its 12th Five-Year Plan that, taken together, could effectively impose a price on greenhouse gas emissions. While the irony is likely not lost on its leaders, chances are slim indeed that China, with so much to gain from free trade, would ever impose a BCA on goods imported from the United States. At least for the time being, then, climate-related protectionism has receded as an issue of primary concern for the world's major trading partners.

The same cannot be said for climate-friendly "clean tech" subsidies, which have generated two companion WTO disputes in recent months. One case, between the United States and China, tackles Chinese programs to help domestic wind turbine manufacturers, while the other, between Japan and Canada, deals primarily with Canadian support for locally produced solar photovoltaic panels. While ostensibly addressing different industries in the developing and developed worlds, respectively, taken together the cases appear more like two sides of the same coin. Both highlight a range of potential conflicts—and opportunities for coordination—between climate mitigation measures and the requirements of international trade law.

DS419: Writing the Rules of the Game for Clean Energy Subsidies

Skyrocketing growth in China's wind energy sector is one of the most significant recent developments in the global effort to curb climate change. Since China is the world's top emitter of greenhouse gases and remains heavily dependent on coal-fired electricity generation,¹⁴ the emergence of a vibrant Chinese clean-tech industry not only promises to generate benefits for that country's citizens but is also likely to yield significant spillover effects for the rest of the world.¹⁵ Most significantly, Chinese wind power will lead to lower aggregate global greenhouse gas emissions than would otherwise occur under a business-as-usual scenario. And because of China's vast economies of scale, the growth of a robust wind industry there also will facilitate the dissemination of cheaper clean-technology products world-

¹² In fact, a persuasive case can be made that certain industries already are benefiting, as compared with their European competitors, from the lack of a carbon price in the United States.

¹³ An important exception appears to be the European Union's new rules for including carbon emissions associated with international aviation in its Emissions Trading System. Such rules have already sparked challenges by some U.S. airline companies, with Chinese companies threatening similar action, possibly at the WTO. See (130 WCCR, 7/5/11.)

¹⁴ See U.S. Energy Information Administration, International Energy Outlook 2010: Energy Related Carbon Dioxide Emissions, <http://www.eia.gov/oiaf/ieo/emissions.html>.

¹⁵ See Daniel Firger, "What Hu's Washington Visit Says About Climate Change," HUFFINGTON POST, January 14, 2011, http://www.huffingtonpost.com/daniel-firger/hus-washington-visit-and-_b_809134.html.

wide, helping other countries make the much-needed transition away from fossil fuels.¹⁶

Notwithstanding these advantages, China's support for domestic wind energy manufacturers has run into trouble. In December 2010 the Office of the United States Trade Representative (USTR) initiated a dispute before the WTO alleging that Chinese wind energy subsidies violated international trade law.¹⁷ The dispute, captioned "DS419," may yet be resolved by the parties, which are currently consulting amicably with each other. Nevertheless, the simple fact that the United States has chosen to file a complaint with the WTO on this subject serves as an important signpost in the new and largely unfamiliar landscape of international trade in climate-friendly goods and services.

The U.S. complaint, which originated with a petition by the United Steelworkers Union (USW) under domestic trade law,¹⁸ concerns an allegedly "prohibited subsidy" under Article 3.1(b) of the WTO Agreement on Subsidies and Countervailing Measures (SCM).¹⁹ The USW petition constituted a broad-brushstroke challenge to China's clean-tech agenda, making a number of claims concerning not only "prohibited" subsidies under Article 3.1 of the SCM Agreement,²⁰ but also "actionable" subsidies under Articles 5 and 6, as well as discrimination against imported goods under Article III:4 of the General Agreement on Tariffs and Trade of 1994 (GATT) and paragraph 3(a) of China's Protocol of Accession to the WTO.²¹ In contrast, the U.S. request for consultations is much narrower in scope. Its exclusive focus is a set of domestic content requirements, in a particular program of the Chinese central government, which makes subsidies conditional upon the use of parts domestically produced in China and therefore allegedly violates Article 3.1(b) of the SCM Agreement.²²

At first blush, DS419 seems to be about finding an answer to a relatively simple question: whether certain Chinese subsidies for wind power violate specific provisions of international trade law. But the facts and legal arguments at issue in DS419 make sense only in context; and understanding the context out of which this

¹⁶ *Id.*

¹⁷ Measures Concerning Wind Power Equipment, Request for Consultations (U.S.-China), WT/DS419/1, Dec. 22, 2010, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds419_e.htm. See also Office of the United States Trade Representative (USTR), Press Release, "United States Requests WTO Dispute Settlement Consultations on China's Subsidies for Wind Power Equipment Manufacturers," Dec. 22, 2010, <http://www.ustr.gov/about-us/press-office/press-releases/2010/december/united-states-requests-wto-dispute-settlement-con-> and 249 WCCR, 12/22/10).

¹⁸ United Steelworkers, Press Release, "USW Files Trade Case to Preserve Clean, Green Manufacturing Jobs in America," Sept. 9, 2010, http://www.usw.org/media_center/releases_advisories?id=0327.

¹⁹ Agreement on Subsidies and Countervailing Measures, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 UNTS 14.

²⁰ *Id.*

²¹ General Agreement on Tariffs and Trade 1994, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 UNTS 187, 33 ILM 1153 (1994); Accession of the People's Republic of China - Decision of Nov. 10, 2001, available at http://www.wto.org/english/thewto_e/acc_e/completeacc_e.htm.

²² See USTR, *supra* note 17.

dispute arises requires us to keep at least three distinct realities in mind.

First, there is the reality of climate change. The planet already is experiencing melting of arctic sea ice and low-latitude glaciers, more severe and frequent storms, dangerous heat waves, desertification, and sea level rise.²³ These climate impacts are affecting the lives of millions of people, many of whom are among the least able to adapt to the environmental changes afoot. From citizens of small island states facing the prospect of disappearing homelands to indigenous tribal communities above the Arctic Circle confronted with vanishing fish and game upon which traditional livelihoods depend, climate change has begun to wreak havoc for the most vulnerable members of humankind. Carbon dioxide levels today are higher than at any time during the past 800,000 years, and probably for much longer,²⁴ and 2010 is tied as one of the warmest years in recorded history.²⁵

The international community, including the United States and China, agreed to the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, endorsing its goal of avoiding “dangerous anthropogenic interference with the climate system.”²⁶ To achieve this, the world’s pre-eminent body on climate science, the Intergovernmental Panel on Climate Change (IPCC), has warned that global temperature rise must be constrained to 2 degrees Celsius (3.6 degrees Fahrenheit) above the pre-industrial average.²⁷ In order to have just a 50 percent chance of hitting this target, the IPCC has concluded that atmospheric concentrations of carbon dioxide must be kept below 450 parts per million.²⁸ Meeting these targets, which the international community explicitly agreed to at the 2009 Conference of the Parties (COP) to the UNFCCC in Copenhagen and the 2010 COP in Cancún,²⁹ will require a major increase in the use of renewable rather than fossil sources of energy.

Yet emissions, particularly from China and much of the rest of the developing world, are growing fast. Sometime in 2007, China overtook the United States to become the world’s largest emitter of greenhouse

gases.³⁰ In 2009, the most recent year for which figures are available, Chinese carbon dioxide emissions had risen to one-quarter above U.S. emissions and were nearly double the total emissions from all of the European Union’s 27 member states.³¹ Notably, while China’s installed capacity for wind energy skyrocketed from just 346 megawatts in the year 2000 to 16 gigawatts in 2010, a 40-fold increase,³² wind power still provides less than 1 percent of the nation’s electricity generation.³³ By comparison, 71 percent of China’s electricity comes from coal, the most polluting fossil fuel.³⁴ And China’s use of coal is soaring. In less than four years China has moved from having a rough balance between its coal imports and exports, to becoming a voracious importer of coal from around the world, including the United States.³⁵ It is of course worth recalling, especially in the context of international trade, that roughly one-quarter of China’s emissions are directly related to the production of goods for export, not domestic consumption.³⁶

This brings us to a second reality, China’s status as a developing economy. As recently as the year 2000, China’s per capita gross domestic product stood at \$1,000, as compared to \$35,000 in the United States.³⁷ Even today, China’s GDP per capita is still just \$3,700, while the U.S. figure is over 12 times greater.³⁸ Indeed, for all the talk of China’s skyrocketing growth and clean tech prowess, it is useful to recall that hundreds of millions of people in rural China still rely upon straw and wood for household heating and cooking, and have little or no access to electricity. So even as the world’s leading emitter, China’s per capita emissions are still just one-third those of the United States.³⁹ Furthermore, China is responsible for just a small share of the world’s cumulative (historical) emissions. From 1850 to 2006, by one count, China contributed just 8.6 percent of the total, as compared to 29 percent for the United States and 27 percent for the European Union.⁴⁰

The political imperative to raise its citizens’ living standards and grow its economy, combined with the historical fact of its very recent rise as a world power, helps to explain the Chinese government’s approach to

²³ See Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report*. Contribution of Working Groups I, II and III to the Fourth Assessment, available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm (Fourth Assessment Report).

²⁴ Throughout most of human history, carbon dioxide concentrations were at 280 parts per million. As of March 2011, the figure stood at 392 parts per million. Mauna Loa Observatory, Earth System Research Laboratory, Global Monitoring Division, National Oceanic and Atmospheric Administration (NOAA), *Trends in Atmospheric Carbon Dioxide*, <http://www.esrl.noaa.gov/gmd/ccgg/trends/>.

²⁵ NOAA, 2010 Tied for Warmest Year on Record, http://www.noaanews.noaa.gov/stories2011/20110112_globalstats.html.

²⁶ United Nations Framework Convention on Climate Change (opened for signature June 20, 1992, entered into force 1994) (1992) 31 ILM 848 (hereinafter UNFCCC), art. 2.

²⁷ See IPCC, *supra* note 23.

²⁸ *Id.*

²⁹ See UNFCCC Decision 2/CP.15 (2009) (hereinafter “Copenhagen Accord”), available at <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf>; UNFCCC Draft Decision/CP.16 (2010) (hereinafter “Cancún Agreements”), available at <http://cancun.unfccc.int>.

³⁰ U.S. Energy Information Agency, *International Emissions Data*, <http://bit.ly/l5PVEa>.

³¹ *Id.*

³² See Global Wind Energy Council, *China—Total Installed Capacity*, <http://www.gwec.net/index.php?id=125>.

³³ U.S. Energy Information Agency, *Countries—China*, <http://eia.gov/countries/cab.cfm?fips=CH>.

³⁴ *Id.*

³⁵ See Rebekah Kebede and Michael Taylor, “China Coal Imports to Double in 2015, India Close Behind,” *REUTERS*, May 30, 2011, <http://www.reuters.com/article/2011/05/30/us-coal-asia-idUSTRE74T2Q220110530>.

³⁶ Tao Wang and Jim Watson, “Who Owns China’s Carbon Emissions?,” Tyndall Centre Briefing Note No. 23 (2007), Tyndall Centre for Climate Change Research, University of Sussex, <http://www.tyndall.ac.uk/sites/default/files/bn23.pdf>.

³⁷ World Bank, *World Development Indicators—China*, <http://data.worldbank.org/country/china>.

³⁸ *Id.*

³⁹ U.S. Energy Information Agency, *International Emissions Data*, *supra* note 30.

⁴⁰ Friends of the Earth-UK, “Climate Policies and Action: A Comparison Between the United States and China,” http://www.foe.co.uk/resource/evidence/china_us_comparison.pdf (citing data from World Resources Institute, Carbon Analysis Indicator Tools, available at <http://cait.wri.org>).

international climate diplomacy. It also explains China's broader industrial policy goals, strategies, and tactics. According to a recent analysis published in the *Harvard Business Review*, "Beijing has been quietly implementing policies to enable China to overtake the West as the globe's technology powerhouse."⁴¹

Recognizing the fact that future economic growth will be driven by high technology (including, notably, clean technology), China's leaders have embarked upon a comprehensive strategy to reduce dependence on imported technologies in key sectors while boosting research and development spending, patent applications, and innovation.⁴² Tactics include requiring foreign companies seeking access to the Chinese market to form joint ventures with state-owned enterprises, transfer technologies, relocate certain managerial and design functions to Chinese rather than overseas facilities, and procure a certain percentage of components domestically.⁴³ The allegedly illegal subsidy program at issue in the DS419 dispute is thus clearly part of a much larger story, one that will shape not only the clean-tech industry but also the world economy for decades to come.

A third and final reality is the fact that the U.S. economy is still recovering slowly—and relatively joblessly—from a financial crisis and the worst recession since the Great Depression. Among the Obama administration's key strategies for the recovery have been so-called "green jobs," which include manufacturing jobs building wind turbines, solar panels, and other clean-tech products.⁴⁴ Another key element of the Obama recovery plan has been a new emphasis on exports, with the president in his 2010 State of the Union speech calling for a National Export Initiative to double exports by 2014, an increase that he said will support 2 million jobs.⁴⁵ As part of this effort, the Treasury Department has been working behind the scenes to push China on currency exchange rate flexibility, which would make U.S. exports cheaper.⁴⁶

Complicating all of these initiatives, of course, is the significant effort in Congress to forestall climate action, with a slew of new bills introduced since January to roll back climate initiatives and programs, most prominently Environmental Protection Agency authority under the Clean Air Act to regulate greenhouse gases,⁴⁷ but also budget proposals that would remove a variety

⁴¹ Thomas M. Hout and Pankaj Ghemawat, *China vs. the World: Whose Technology Is It?*, *HARV. BUS. REV.*, Dec. 2010, p. 95.

⁴² *Id.*

⁴³ *Id.*

⁴⁴ See (5 WCCR, 1/8/10).

⁴⁵ The White House, Press Release, "Remarks by the President in State of the Union Address," Jan. 27, 2010, <http://www.whitehouse.gov/the-press-office/remarks-president-state-union-address>.

⁴⁶ See U.S. Department of the Treasury, Office of International Affairs, "Report to Congress on International Economic and Exchange Rate Policies," Feb. 2011, at 12-16, available at <http://www.treasury.gov/resource-center/international/exchange-rate-policies/Documents/Foreign%20Exchange%20Report%20February%204%202011.pdf>.

⁴⁷ For a comprehensive account of all climate change-related legislation introduced in the 112th U.S. Congress, see Columbia Center for Climate Change Law, Climate Legislation Tracker, Legislation Tracker Guide, <http://www.law.columbia.edu/centers/climatechange/resources/legislation>; see also BNA's climate change and clean energy

of trade-distorting tax breaks and subsidies for the fossil fuel industry.⁴⁸

While the full factual record in DS419 remains unclear pending additional briefing by the parties, if the Chinese documents cited in the U.S. request for consultations do indeed require domestic inputs as a condition for the receipt of subsidies under the challenged program, then a reasonable prima facie case can be made that China has violated the SCM Agreement.

According to Professor Robert Howse of New York University School of Law, however, DS419 may push the WTO's Dispute Settlement Body and, ultimately, its Appellate Body to grapple with some heretofore unanswered questions. Speaking at a public forum on the dispute convened by the Columbia Center for Climate Change Law on March 30, 2011,⁴⁹ Howse said these include whether the exceptions clauses of Article XX of the GATT are pleadable as a defense to a complaint under the SCM Agreement, which has no analogous provisions and, if so, whether it is possible to justify a measure like the domestic content requirement at issue here on grounds such as protection of the environment and conservation of exhaustible natural resources.

Ultimately, the tribunal deciding DS419 (or a future case like it) may be forced to address the problem of allegedly trade-distorting clean-tech subsidies within the broader context of a pervasively uneven global energy marketplace, where enormous government interventions already have tilted the playing field in favor of fossil fuels and away from renewable sources of energy.⁵⁰ Whatever it decides here, the WTO Appellate Body likely will help to create new rules of the game for clean-energy subsidies, affecting not just the United States and China but much of the rest of the world.

DS412: Japan v. Canada and the Future of Green Jobs

On Sept. 13, 2010, Japan filed a request for consultations with the WTO in a comparable matter, alleging that a Canadian provincial law violated key provisions of the GATT, the Agreement on Trade-Related Investment Measures (TRIMs), and the Agreement on Subsidies and Countervailing Measures (SCM).⁵¹ Like DS419, domestic content requirements are at issue in this dispute, captioned "DS412," this time in the Province of Ontario's landmark green energy law.⁵²

The challenged law was designed to guarantee that local producers—and local jobs—supply a minimum percentage of the technology used to meet the province's ambitious targets for renewable energy genera-

legislation tracker, <http://climate.bna.com/climate/tracker.aspx>.

⁴⁸ See (30 WCCR, 2/14/11).

⁴⁹ A video of the complete program is available at <http://www.law.columbia.edu/centers/climatechange/conferences>.

⁵⁰ See "Green View: How to Save \$300 Billion," *THE ECONOMIST*, Nov. 12, 2010, http://www.economist.com/blogs/newsbook/2010/11/fossil-fuel_subsidies.

⁵¹ Certain Measures Affecting the Renewable Energy Generation Sector, Request for Consultations (Japan-Canada), WT/DS412/1, Sept. 13, 2010, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds412_e.htm.

⁵² Green Energy and Green Economy Act, 2009, S.O. 2009, c. 12 (Can. Ont.), http://www.ontla.on.ca/bills/bills-files/39_Parliament/Session1/b150ra.pdf; See also (107 WCCR, 6/1/11).

tion.⁵³ On the one hand, Ontario hopes to spur investment in homegrown clean-tech jobs by guaranteeing favorable feed-in tariff (FIT) rates for power generators who purchase solar panels and other equipment produced locally.⁵⁴ On the other hand, Japan—already the home of several leading solar photovoltaic manufacturers—seeks to maintain its sizable lead in clean tech.

The issues in DS412, although similar in some ways to those of DS419, may have different consequences for countries like the United States, where policymakers, like their Canadian counterparts, have at times tried to link clean-energy mandates with green jobs programs. If the technologies used to green the American grid must come from Japan and Denmark (where industries are well-developed) rather than Michigan and Ohio (where they may need significant government support to become cost-competitive), then what is already a delicate balancing act between climate change mitigation and job creation in the context of economic recovery may prove even harder to maintain. A closer look at Japan's three claims against Canada helps to explain why.

Japan's first claim rests on Article III.4 of the GATT, which prohibits discrimination between imported products and "like products of national origin" with respect to rules and regulations affecting their "sale, purchase, transportation, distribution or use."⁵⁵ Under this article, imported goods must be accorded treatment "no less favorable" than that accorded to goods produced domestically.⁵⁶ This principle is known as "National Treatment," and an extensive body of WTO case law could certainly be read to show that domestic origin requirements such as those in Ontario's FIT program are illegal under the GATT.

Japan's submission to the WTO is straightforward, claiming that the domestic content rules in Ontario's new green energy law "appear to be laws, regulations or requirements affecting the internal sale, offering for sale, purchase, transportation, distribution, or use of equipment for renewable energy generation facilities that accord less favorable treatment to imported equipment than that accorded to like products originating in Ontario."⁵⁷ To the extent the provincial rules are found

to discriminate in this manner, they may be held to violate Canada's commitments under the GATT.

Second, Japan argues that Ontario's rules violate Article 2.1 of the TRIMs Agreement,⁵⁸ which requires that any TRIM applied by Canada must be consistent with the national treatment rules set out in Article III.4 of the GATT. Annex 1(a) of the TRIMs Agreement contains an illustrative list of such prohibited measures, including those which require "the purchase or use by an enterprise of products of domestic origin or from any domestic source . . . specified in terms of a proportion of volume or value of its local production."⁵⁹ Again, if the WTO's Dispute Settlement Body finds that Ontario's domestic content requirements are indeed couched in these terms, they too may be struck down.

Finally, Japan points to Article 3.1(b) of the SCM Agreement,⁶⁰ alleging that Ontario's FIT program constitutes a prohibited subsidy because it is provided "contingent . . . upon the use of domestic over imported goods."⁶¹ If Japan can show that Ontario's favorable tariff rates are granted to power producers contingent upon their use of a certain proportion of renewable energy equipment produced in the province rather than in, say, Japan, it may prevail on this point too.

Conclusion

Both DS412 and DS419 will take some time to work their ways through the WTO dispute resolution system. It is thus far too early to speak conclusively of their long-term effects on the clean energy and green growth agenda, not to mention international trade law itself. But the mere fact that these disputes have been initiated says something significant about the emerging rules governing trade in climate-friendly goods and services.

Contrary to conventional wisdom, border carbon adjustment measures and other forms of climate protectionism have yet to materialize as a significant threat to the openness of the international trading system. Instead, it is government subsidies for clean technology that have come under attack, and may yet destabilize long-standing practices and rules under the GATT/WTO regime.

For now, interested parties would do well to pay close attention to the proceedings in Geneva, which have the potential to write the rules of the road for a new era in which climate mitigation measures and world trade law interact in increasingly complex and coordinated ways.

⁵³ See Lee Greenberg, "Green Energy Has Japan Seeing Red," *OTTAWA CITIZEN*, Sept. 14, 2010, available at <http://www.ottawacitizen.com/business/Green+energy+Japan+seeing/3520596/story.html>.

⁵⁴ See Ontario Power Authority, Renewable Energy Feed-In Tariff Program, <http://fit.powerauthority.on.ca/what-feed-tariff-program>.

⁵⁵ GATT, *supra* note X, art. III.4.

⁵⁶ *Id.*

⁵⁷ Certain Measures Affecting the Renewable Energy Generation Sector, Request for Consultations (Japan-Canada), WT/DS412/1, Sept. 16, 2010, at 2, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds412_e.htm.

⁵⁸ Agreement on Trade-Related Investment Measures, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 UNTS 186.

⁵⁹ *Id.*, Annex 1.

⁶⁰ Agreement on Subsidies and Countervailing Measures, *supra* note 19, art. 3.1.

⁶¹ Certain Measures Affecting the Renewable Energy Generation Sector, Request for Consultations (Japan-Canada), WT/DS412/1, Sept. 16, 2010, at 2, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds412_e.htm.