

# CARBON TARIFFS AND THE WTO: AN EVALUATION OF FEASIBLE POLICIES

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## ABSTRACT

Both the European Union, which currently has an emissions trading scheme for greenhouse gases, and the USA, which is considering implementing such a program, are exploring the possibility of including foreign producers in that program by requiring importers of foreign goods to pay charges relating to the amount of CO<sub>2</sub> emitted in the production of those goods. This article examines the legality of such measures under WTO law. While academic literature has in recent years considered carbon tariffs in the abstract, this article contextualizes that discussion by analyzing European and American proposals to enact carbon tariffs, focusing primarily on the 2008 *Lieberman-Warner Bill*. This article concludes that carbon tariffs are, subject to a number of constraints, generally permissible under WTO law. However, it also argues that while carbon tariffs may generally be legally permissible, additional domestic political constraints may significantly limit the set of legal carbon tariffs which are practically feasible in any given state. This article posits that any meaningful discourse on carbon tariffs must incorporate both political and legal constraints, and it seeks to contribute to this discourse by identifying the relevant constraints and exploring certain policy options which could satisfy those constraints.

## I. INTRODUCTION

As a response to concerns about anthropogenic climate change through greenhouse gas emissions, and in an attempt to fulfill their obligations under the Kyoto Protocol, a number of jurisdictions have enacted or are considering enacting either cap-and-trade schemes for CO<sub>2</sub> emissions or carbon taxes. However, such regimes impose additional costs on domestic producers relative to foreign producers, and this has given rise to concerns about the competitiveness of domestic firms and ‘leakage’ of carbon emissions to other jurisdictions with less stringent policies. While there are

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a number of potential policy responses to these concerns,<sup>1</sup> the measure that has been the most hotly debated in recent years and is the most likely to be implemented by states is a ‘carbon tariff.’ As legislative measures to implement such tariffs progress, such measures are attracting increased scrutiny in terms of their compliance with international trade law; for example, China, a major opponent of carbon tariffs, has stated that it believes that carbon tariffs would violate WTO rules.<sup>2</sup> This article will thoroughly examine the permissibility of such carbon tariffs under WTO law.

The scope of this article is limited to discussing these so-called ‘carbon tariffs,’ which are defined here as any measure which imposes a levy on an imported good on the basis of either the CO<sub>2</sub> emitted in the production of that good specifically or on the CO<sub>2</sub> emissions or CO<sub>2</sub> emission reduction efforts of the producing country generally. The term ‘carbon *tariff*’ may be misleading, as such measures are not necessarily tariffs in the traditional sense. Such measures are, as discussed below, generally better characterized as charges levied on imports which are meant to equalize the charges paid by domestic producers for their CO<sub>2</sub> emissions. Notwithstanding the potential confusion, given that the term carbon tariff is often used in popular parlance to refer to such measures, this article adopts that term, hoping that this clarification will prevent confusion throughout this article. This article does not discuss other similar border charges, such as energy tax adjustments at the border, which have been discussed elsewhere.<sup>3</sup> It also does not discuss the trade-related aspects of other measures states might potentially take to limit greenhouse gas emissions, such as subsidies for green technology<sup>4</sup> or other domestic regulatory regimes.<sup>5</sup> Rather, it focuses specifically on carbon tariffs as defined above, as such tariffs have been

<sup>1</sup> For a brief yet broad survey of the possible policy options, see Harro van Asselt and Frank Biermann, ‘European Emissions Trading and the International Competitiveness of Energy-Intensive Industries: A Legal and Political Evaluation of Possible Supporting Measures’ (2007) 35 *Energy Policy* 497 [Asselt and Biermann]. For an overview of the WTO-legality of a variety of state measures to fight climate change, see Meinhard Doelle, ‘Climate Change and the WTO: Opportunities to Motivate State Action on Climate Change Through the World Trade Organization’ (2004) 13 *RECIEL* 85. See also ZhongXiang Zhang and Lucas Assunção, ‘Domestic Climate Policies and the WTO’ (2004) 27 *World Econ* 359.

<sup>2</sup> Reuters, ‘China says ‘Carbon Tariffs’ Breach WTO Rules’ *New York Times*, 3 July 2009, available online at <<http://www.nytimes.com/reuters/2009/07/03/world/international-uk-china-climate.html>> accessed 29 July 2009.

<sup>3</sup> See, eg Gavin Goh, ‘The World Trade Organization, Kyoto, and Energy Tax Adjustments at the Border’ (2004) 38 *J World Trade* 395 [Goh]; Frank Biermann and Rainer Brohm, ‘Border Tax Adjustments on Energy Taxes: A Possible Tool for European Policymakers in Implementing the Kyoto Protocol?’ (2005) 74 *Vierteljahrsheft zur Wirtschaftsforschung* 249 [Biermann and Brohm].

<sup>4</sup> See, eg Andrew Green, ‘Trade Rules and Climate Change Subsidies’ (2006) 5 *World Trade Rev* 377.

<sup>5</sup> See, eg Andrew Green, ‘Climate Change, Regulatory Policy and the WTO: How Constraining Are Trade Rules?’, (2008) 8 *JIEL* 143.

considered in some depth over the past year by both the USA and the European Union (EU).

While there has been much literature in recent years on the permissibility of carbon tariffs, that literature has generally considered carbon tariffs in the abstract. This article will contextualize that discussion by analyzing European and American proposals to enact carbon tariffs. More specifically, it will probe the validity of carbon tariffs under WTO law through a detailed analysis of the provisions of the *Lieberman-Warner Bill*, a bill proposed in the US Senate in 2007 which would have seen the introduction of an American carbon tariff. Using this bill as a foil, this article concludes that carbon tariffs are, subject to a number of constraints on the exact structure of those tariffs, generally permissible under WTO law.

However, it also argues that while carbon tariffs may generally be legally permissible, additional domestic political constraints may significantly limit the set of legal carbon tariffs which are practically feasible in any given state. This article posits that any meaningful discourse on carbon tariffs must take into account both political and legal constraints, and it seeks to contribute to this discourse by identifying the relevant constraints and exploring certain policy options which could satisfy those constraints. As the primary purpose of this article is to examine the feasibility of such tariffs, this article does not purport to reach any definitive conclusions on the ultimate desirability of enacting such tariffs. However, it does ultimately suggest that states should exercise caution in enacting such tariffs.

This article will proceed as follows. Part two provides an overview of the economic and political justifications for carbon tariffs as well as some of their potential pitfalls. Part three provides a detailed overview of climate change policy in the EU and the USA, with a particular focus on recent proposals for carbon tariffs from those jurisdictions. Part four examines the legality of carbon tariffs under WTO law and explores the constraints that WTO law places on their structure. Part five then integrates legal and political constraints for the purpose of briefly outlining feasible policy options for dealing with competitiveness concerns. Part six then provides a brief conclusion.

## II. POLICY CONSIDERATIONS RELATING TO CARBON TARIFFS

Prior to examining proposals for carbon tariffs or examining the WTO-legality of such tariffs, it is important to understand why countries are considering imposing such tariffs. This section first examines three reasons why states may decide to impose carbon tariffs to complement domestic cap-and-trade systems or carbon taxes: 'leakage' of CO<sub>2</sub> emissions, competitiveness concerns, and political economy considerations.

One rationale advanced for carbon tariffs is that they prevent 'leakage' of CO<sub>2</sub> emissions to foreign countries that do not have effective cap-and-trade systems or carbon tariffs. The notion here is that without carbon tariffs,

firms—especially in those industries which have relatively high CO<sub>2</sub> emissions which cannot be abated at low cost—that are required to pay carbon taxes or purchase emission allowances when operating in that jurisdiction may relocate to a foreign jurisdiction which does not impose similar charges on firms' CO<sub>2</sub> emissions.<sup>6</sup> Producing in that foreign jurisdiction, the firm can then export its products back to consumers in the jurisdiction with the CO<sub>2</sub> emissions charges which it left. In these circumstances, the abatement of CO<sub>2</sub> emissions which the home jurisdiction's emissions charge was supposed to realize does not actually occur, as the firm has avoided the charges by relocating its operations and merely emitting the CO<sub>2</sub> in another jurisdiction.<sup>7</sup> A carbon tariff is intended to lessen or negate this effect by ensuring that firms producing for markets in a particular jurisdiction cannot evade the charges by relocating their operations to a foreign jurisdiction.

A second and related economic rationale for carbon tariffs is that they ensure that foreign producers in countries without carbon taxes or equivalent schemes do not benefit from an artificial comparative advantage stemming from more lax regulations on greenhouse gas emissions. The notion of a comparative advantage rests on the idea that those countries that are able to produce certain goods relatively more efficiently than others should do so.<sup>8</sup> While normally we view it as economically optimal for countries to exploit whatever comparative advantage they might have, the comparative advantage flowing from a more permissive regime for greenhouse gas emissions is different from other forms of comparative advantage, as it results in the negative externality of increased global warming.<sup>9</sup> Although it remains desirable for those countries that are relatively most efficient at producing a particular good to produce it, the notion of efficiency necessarily needs to include those

<sup>6</sup> There is an alternative mechanism through which leakage can occur other than relocation of firms. Since a carbon tax in jurisdiction X lowers the relative cost of producing in jurisdiction Y as compared to jurisdiction X, existing producers in jurisdiction Y may be able to capitalize on their lower production costs to increase their market shares in jurisdiction X. This may cause a contraction in production of firms in jurisdiction X but a corresponding expansion of relatively high-CO<sub>2</sub> emitting production in jurisdiction Y.

<sup>7</sup> For an analysis of potential leakage of CO<sub>2</sub> emissions in the European cement industry, see Damien Demailly and Philippe Quirion, 'CO<sub>2</sub> abatement, competitiveness and leakage in the European cement industry under the EU ETS: grandfathering versus output-based allocation', (2006) 6 *Climate Policy* 93. See also Mustafa H. Babiker, 'Climate Change Policy, Market Structure, and Carbon Leakage' (2005) 65 *J Int Econ* 421; Christopher L. Weber and Glen P. Peters, 'Climate change policy and international trade: Policy considerations in the US', (2009) 37 *Energy Policy* 432.

<sup>8</sup> See, eg Michael J. Trebilcock and Robert Howse, *The Regulation of International Trade* (3rd edn Routledge, London 2005) 3 [Trebilcock and Howse].

<sup>9</sup> In this respect, the emission of greenhouse gas emissions is different from other forms of comparative advantage stemming from different regulatory regimes, such as lower labour standards or more lax standards for air pollution. While the harms from lower labour standards or less restrictive air pollution standards accrue primarily to that country, the harm of global warming stemming from greenhouse gas emissions obviously has impacts beyond the emitting state.

externalities which arise as a result of that production. Carbon tariffs effectively force foreign producers to internalize the externality of CO<sub>2</sub> emissions, at least to the same degree as do domestic producers.

While both of these rationales provide economic justifications for carbon tariffs, much of the increased focus on adopting carbon tariffs has undoubtedly stemmed more from political considerations rather than purely economic considerations. It is certainly politically difficult for developed countries to justify imposing additional costs on domestic manufacturers which are not similarly imposed on foreign manufacturers.<sup>10</sup> This is because such costs can, as noted above, lead to the decreased competitiveness of domestic firms, which can then lead firms to relocate to more permissive jurisdictions, increasing domestic unemployment. These political considerations loom large in any consideration of domestic environmental regulations, but they are especially pronounced with the issue of greenhouse gas emissions. This is because, unlike is the case with environmental restrictions designed to protect the quality of local air or water, the harms of greenhouse gas emissions are a global problem, and it may be difficult to convince domestic constituencies to accept policies to address global problems without corresponding action from other states.<sup>11</sup>

As Pauwelyn notes, the concern about the competitiveness of American firms vis-à-vis firms in developing countries is a major reason that the USA failed to sign on to the Kyoto Protocol.<sup>12</sup> Indeed, given the increasingly

<sup>10</sup> This is not to suggest that states will never be able to enact environmental protection measures which impose costs upon domestic manufacturers. Indeed, as Vogel argues, there has not really been a 'race to the bottom' in environmental protection, as many jurisdictions have been enacting more rather than less stringent environmental protection measures in recent years. See David Vogel, 'Environmental Regulation and Economic Integration', (2000) 3 JIEL 265. However, as Vogel himself acknowledges, the fact that states have not been fully dissuaded from enacting more stringent environmental protection measures does not mean that international trade has not to some extent tamed their ability to enact such measures. Indeed, as the following discussion suggests, it seems that concerns about competitiveness and the migration of firms has played a role in dissuading states from adopting stringent measures for dealing with greenhouse gas emissions.

<sup>11</sup> In this respect, the abatement of greenhouse gases has the characteristics of a public good. A public good is one which is non-rivalrous and non-excludable. Economic theory has long known that in many cases where rational actors make decisions in their own self-interests, public goods will be under-provided relative to the socially-optimal level of provision of that good. The abatement of greenhouse gas emissions meets the characteristics of a public good, as all states benefit from any particular state's efforts to lower its greenhouse gas emissions.

While the literature on public goods is exceptionally large, for the classical starting point in the literature, see Paul A Samuelson, 'The Pure Theory of Public Expenditure' (1954) 36 Rev Econ Stat 387. On the concept of global public goods, see generally Inge Kaul, Isabelle Grunberg and Marc A Stern (eds) *Global Public Goods: International Cooperation in the 21<sup>st</sup> Century* (OUP, New York 1999).

<sup>12</sup> Joost Pauwelyn, 'U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law' Working Paper, Nicholas Institute for Environmental Policy Solutions, Duke University, <<http://www.nicholas.duke.edu/institute/internationaltradelaw.pdf>> [Pauwelyn] accessed 29 July 2009.

precarious state of the manufacturing sector in developed countries in recent years—which is perceived by many to be caused at least in part by competition from developing countries—a scheme which is perceived to further handicap domestic manufacturers would be extremely difficult for any government to implement.<sup>13</sup> An example of such views is provided in the testimony of Robert Baugh, the Executive Director of AFL-CIO Industrial Council, before a US Senate Subcommittee in relation to proposed US measures to limit domestic greenhouse gas emissions:

[China] and other major developing nations must be part of the solution or everything we the EU and other nations do to cut carbon emissions will be for naught.... To put it bluntly, it is not in our national interest to see our efforts to reduce carbon emissions become yet another advantage that a developing nation uses to attract business. However, it is in

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In 1997, the US Senate passed the Byrd-Hagel Resolution by a vote of 95-0, which stated that, in the opinion of the Senate, the USA should not sign any protocol that 'mandate[s] new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties, unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period.' S. Res. 98, 105th Cong. (1997) (enacted).

Political rhetoric rejecting Kyoto because of its failure to include developing has also been evident through the Bush administration. For example, in a 2001 speech discussing climate change, President Bush noted that '[global warming] is a challenge that requires a 100 percent effort; ours, and the rest of the world's. The world's second-largest emitter of greenhouse gases is China. Yet, China was entirely exempted from the requirements of the Kyoto Protocol.' White House Press Release (11 June 2001) <<http://www.whitehouse.gov/news/releases/2001/06/20010611-2.html>>.

<sup>13</sup> In a 2003 survey relating to Americans' attitudes towards global warming, Leiserowitz found that while large majorities of Americans supported government action to curb CO<sub>2</sub> emissions, 78% of respondents were against a gasoline tax, while 60% of respondents were against a business energy tax. The population was evenly split 40%/40% on an emissions trading scheme, with 18% undecided. See Anthony Leiserowitz, 'Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values', (2006) 77 *Climate Policy* 45. This suggests that while individuals care about global warming, they may be unwilling to undertake costly policy measures to realize that CO<sub>2</sub> reduction. To the extent that an emissions trading scheme is perceived to disadvantage domestic manufacturing, this may make it more difficult to politically justify such a policy. This conjecture finds support in the work of O'Connor and others, who find, unsurprisingly, that support for CO<sub>2</sub> emissions reduction schemes is negative correlated with the belief that such policies will lead to job loss and hurt economic growth. Robert E O'Connor and others, 'Who Wants to Reduce Greenhouse Gas Emissions?' (2002) 83 *Soc Sci Quart* 1.

Indeed, the political problems of creating a scheme disadvantaging domestic manufacturers are especially pronounced in the USA, where the manufacturers and workers who have the most to lose from the increased costs of a carbon tax or cap-and-trade scheme hold disproportionate political power, because they are located largely in traditional US electoral 'swing states' such as Michigan, Ohio, Pennsylvania and Indiana. This makes it unlikely that any President seeking re-election would sign legislation which would be perceived by the public as a government-imposed handicap on US manufactured goods.

our interest and the world's interest to have developing nations become part of the solution because the problem cannot be solved without them.<sup>14</sup>

Carbon tariffs render the additional costs imposed on domestic manufacturers more politically palatable, thereby making domestic programs designed to curb greenhouse gas emissions and prevent global warming more politically feasible. Thus, perhaps the strongest policy argument in favour of carbon tariffs is that they provide a politically viable mechanism for states to implement a market-based mechanism to encourage their own producers to meaningfully lower their greenhouse gas emissions.<sup>15</sup>

### III. AN OVERVIEW OF PROPOSED LEGAL FRAMEWORKS FOR CARBON TARIFFS

As of yet, there is no legislative or regulatory framework in place in any country which subjects imported goods to a tax or tariff based on the quantity of CO<sub>2</sub> emitted in producing that good. However, in the past few years, such proposals have been seriously discussed by many states, and more concrete proposals that have emerged have now provided scholars and trade lawyers with some idea of the form that carbon tariffs might ultimately take. This section will discuss two proposals for subjecting imports to levies on the basis of their carbon content: (i) the EU proposal to require importers to buy emission allowances in the EU's emissions trading scheme (ETS); and, (ii) the provisions of the *Lieberman-Warner Bill* which would have forced importers to purchase allowances in a new American ETS.

#### A. The EU's ETS and proposals for expanding it to imported goods

The EU's ETS is the largest and most advanced CO<sub>2</sub> ETS currently in operation. Steps taken throughout the 1990s and early 2000s laid the groundwork for concerted European action on climate change,<sup>16</sup> culminating

<sup>14</sup> Testimony of Robert C Baugh, Executive Director AFL-CIO Industrial Council, Before the Subcommittee on Energy and Air Quality of the House Energy and Commerce Committee (19 June 2008) <<http://www.aflcio.org/mediacenter/prsrptm/tm06192008.cfm>> accessed 29 July 2009.

<sup>15</sup> Given the significant costs associated with anthropogenic climate, the economics gains associated from a politically viable way to reduce greenhouse gas emissions in the present may ultimately yield immense long-term savings. For an overview of the relative costs of preventative action versus dealing with the effects of climate change after it occurs, see NH Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: CUP 2007).

<sup>16</sup> In 1993, the Council of the European Communities established a mechanism for monitoring of member states' greenhouse gas emissions. See 93/389/EEC: Council Decision of 24 June 1993 for a monitoring mechanism of Community CO<sub>2</sub> and other greenhouse gas emissions. In 2000, the European Commission released a discussion paper on the creation of a European emissions trading scheme. See 'Green Paper on greenhouse gas emissions trading within the European Union' Com (2000) 87 Final [Green Paper].

in 2003 in Directive 2003/87/EC,<sup>17</sup> which established a European ETS. This scheme now covers over 10,000 installations which collectively account for about 40% of the EU's CO<sub>2</sub> emissions.<sup>18</sup> While the scheme currently only covers domestic facilities and poses no obligations on importers to purchase emissions allowances, there have been some suggestions in recent years of integrating imported goods into the program. This section provides a brief overview of the structure of the ETS as well as a discussion of the possible extension of the ETS to imported goods.

### *1. An overview of the European ETS*

An overview of the structure of the European ETS is necessary in order to understand more recent proposals by the European Commission to expand the scheme to imported products. Under Article 4 of Directive 2003/87/EC, EU member states were required to ensure that, as of 1 January 2005, no installation listed in Annex I of the Directive operated without a greenhouse gas emissions permit, unless it was temporarily excluded by virtue of Article 27.<sup>19</sup> The installations listed in Annex I which are required to hold greenhouse gas emissions permits are divided into four categories: certain energy installations,<sup>20</sup> installations which produce and process ferrous metals,<sup>21</sup> installations involved in the mineral industry,<sup>22</sup> and certain other activities.<sup>23</sup> Thus, not all commercial sources of greenhouse gas

<sup>17</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, [2003] OJ L275/32 [Directive 2003/87/EC].

<sup>18</sup> Questions and Answers on the Commission's proposal to revise the EU Emissions Trading System, MEMO/08/35, <<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/35&format=HTML&aged=0&language=EN&guiLanguage=en>> accessed 29 July 2009.

<sup>19</sup> Directive 2003/87/EC (n 17) at Article 4.

<sup>20</sup> Installations covered under this category are 'combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)', 'mineral oil refineries', and 'coke ovens'. *Ibid*, at Annex I.

<sup>21</sup> Installations covered under this category are 'metal ore (including sulphide ore) roasting or sintering installations' and 'installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2.5 tonnes per hour'. *Ibid*, at Annex I.

<sup>22</sup> Installations covered under this category are 'installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns with a production capacity exceeding 50 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day', 'installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day', and 'installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, and/or with a kiln capacity exceeding 4 m<sup>3</sup> and with a setting density per kiln exceeding 300 kg/m<sup>3</sup>'. *Ibid*, at Annex I.

<sup>23</sup> Installations covered under this category are 'Industrial plants for the production of (a) pulp from timber or other fibrous materials [and] (b) paper and board with a production capacity exceeding 20 tonnes per day.' *Ibid*, at Annex I.

emissions within the EU were included in the scheme, but rather only certain CO<sub>2</sub>-generating activities.<sup>24</sup>

The greenhouse gas emissions permits which those installations are required to hold impose a number of obligations on those installations. Article 5 specifies that applications for such permits must provide detailed information relating to the technology used in the facility, the materials used in the facilities which could lead to CO<sub>2</sub> emissions, the sources of CO<sub>2</sub> emanating from the facility, and the steps to be taken to monitor and report on those emissions.<sup>25</sup> Article 6 specifies that ‘the competent authority shall issue a greenhouse gas emissions permit granting authorization to emit greenhouse gases . . . if it is satisfied that the operator is capable of monitoring and reporting emissions.’<sup>26</sup> Article 6 also specifies the information to be contained in the greenhouse gas emissions permits. Most importantly, however, under Article 6(2)(e), the greenhouse gas emissions permits are to contain ‘an obligation to surrender allowances equal to the total emissions of the installation in each calendar year . . . within four months following the end of that year.’<sup>27</sup> Thus, Article 6(2)(e) is the requirement which in effect obliges installations to acquire sufficient allowances to cover their CO<sub>2</sub> emissions.

Operators can acquire sufficient allowances for their installations either directly from EU member states through initial allocations or by acquiring allowances from other persons holding those allowances.<sup>28</sup> Directive 2004/101/EC, which amended Directive 2003/87/EC, provided an additional way for operators to satisfy a portion of their allowances. Article 2 of Directive 2004/101/EC, which added article 11a to Directive 2003/87/EC, specified that Member States could allow operators to exchange ‘certified emissions

<sup>24</sup> Additionally, as per paragraph 1 of Annex I, ‘Installations or parts of installations used for research, development and testing of new products and processes are not covered by [the] Directive.’ *Ibid.*, at Annex I. Moreover, Article 27 gave Member States the ability to apply to the Commission to have certain facilities excluded until 31 December 2007, though the criteria listed under that Article were fairly strict.

There have been some proposals to expand the scope of the ETS. See, eg Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community, COM (2006) 818 final.

<sup>25</sup> Directive 2003/87/EC (n 17) at Article 5.

<sup>26</sup> *Ibid.*, at Article 6.

<sup>27</sup> *Ibid.*, at Articles 5 and 6. In Article I, ‘allowance’ is defined as ‘an allowance to emit one tone of carbon dioxide equivalent during a specified period, which shall be valid only for the purposes of meeting the requirements of this Directive and shall be transferable in accordance with the provisions of this Directive.’

<sup>28</sup> Article 12 specifies that ‘Member states shall ensure that allowances can be transferred between: (a) persons within the Community; (b) persons within the Community and persons in third countries, where such allowances are recognized in accordance with the procedure referred to in Article 25 without restrictions other than those contained in, or adopted pursuant to, this Directive.’ *Ibid.*, at Article 12.

reductions' and 'emissions reduction units' for allowances, up to a certain percentage of the allocation of allowances to that installation.<sup>29</sup>

Member states bear the responsibility of deciding how to allocate allowances to operators of installations, though the Directive places certain constraints on those allocations. Article 9 specifies that members must develop national allocation plans on the basis of 'objective and transparent criteria' and in accordance with the criteria listed in Annex III of the Directive.<sup>30</sup> Article 10 places another important limitation on the allocation of the allowances; it specifies that 'for the three-year period beginning 1 January 2005 Member States shall allocate at least 95% of the allowances free of charge. For the five-year period beginning 1 January 2008, Member States shall allocate at least 90% of allowances free of charge.'<sup>31</sup>

## 2. *Expanding the ETS to imported goods*

While the European ETS currently only applies to European producers, there have been repeated suggestions in recent years of expanding the ETS to include imported goods. In the 2000 Green Paper on a European Emissions Trading Scheme, concerns about the decreased competitiveness of European firms resulting from the ETS were minimized through the hope that other countries would undertake similar policies:

Possible negative effects on international competitiveness will be minimised if, as is expected, other industrialised countries become involved in greenhouse gas emissions trading under the Kyoto Protocol. When an international trading scheme comes into being, as of 2008, companies are likely to face similar costs whichever industrialised country they are located in.<sup>32</sup>

In the absence of similar steps taken by other countries, there have been increasing suggestions from within the EU of the need to take some type of measure to with respect to imports. For example, in November 2006, French Prime Minister Dominique de Villepin proposed taxing imports from countries that had not ratified the Kyoto protocol.<sup>33</sup> More recently,

<sup>29</sup> Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms, L 338/18.

<sup>30</sup> Directive 2003/87/EC (n 17) at Article 9, Annex III, above note 17, at Article 9, Annex III. Annex III contains 11 criteria for the National Allocation Plans. Perhaps most importantly, the first criterion is that 'the total quantity of allowances to be allocated for the relevant period shall be consistent with the Member State's obligation to limit its emissions pursuant to Decision 2002/358/EC and the Kyoto Protocol.'

<sup>31</sup> *Ibid.*, at Article 10.

<sup>32</sup> Green Paper (n 16) at 7.

<sup>33</sup> Reuters, 'French Plan Would Tax Imports From Non-Signers of Kyoto Pact', *New York Times*, 14 November 2006 <<http://www.nytimes.com/2006/11/14/world/europe/14france.html>> accessed 29 July 2009.

in a speech given on 23 January 2008, José Manuel Barroso, the President of the European Commission, indicated that the EU should ‘be ready to...require importers to obtain [ETS] allowances alongside European competitors’.<sup>34</sup>

In January 2008, the European Commission released a Proposal for a Directive ‘amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community’.<sup>35</sup> This was the first draft Directive explicitly to take into account concerns about carbon leakage stemming from the operation of the ETS, although the EU’s preferred policy response to these concerns was not entirely clear. In the prefatory explanation of the proposed Directive, the Commission, in addressing these concerns, considered two potential proposals to the issue of carbon leakage: either allocating free allowances to certain producers or creating an ‘effective carbon equalization system’.<sup>36</sup> The prefatory note puts much more emphasis on the latter possibility, discussing the possibility of creating a WTO-compliant system which required importers to acquire and surrender allowances on terms ‘no less favourable to institutions within the EU’.<sup>37</sup> However, in the text of the draft Directive itself, the former option seemed to prevail. Paragraph 8 of an amended Article 10 specified that, from 2013 until 2020, ‘installations in sectors which are exposed to a significant risk of carbon leakage shall be allocated allowances free of charge up to 100 percent of the quantity determined in accordance with paragraphs 2 to 6’ of that Article.<sup>38</sup> By contrast, a new Article 10b merely called on the Commission to develop proposals to deal with the issue of carbon leakage, potentially including ‘inclusion of the Community scheme of importers of products produced by the sectors or sub-sectors determined in accordance with Article 10a’.<sup>39</sup> Thus, while the EU has been discussing in very general terms the possibility of implementing some type of carbon tariff, no detailed proposal has yet been made public the details of such a carbon tariff.

## **B. The *Lieberman–Warner Bill* and the creation of a US Cap-and-Trade Scheme**

The USA has lagged behind Europe in broad legislative efforts to reduce greenhouse gas emissions. On the international level, the USA has refused to commit itself to the binding CO<sub>2</sub> reduction commitments of the Kyoto

<sup>34</sup> José Manuel Durão Barroso, ‘Europe’s Climate Change Opportunity’ Speech/08/26.

<sup>35</sup> Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading system of the Community, COM (2008) 16 final [Proposal for a Directive, 2008].

<sup>36</sup> *Ibid.*, at 8.

<sup>37</sup> *Ibid.*, at 8.

<sup>38</sup> *Ibid.*, at Article 10.

<sup>39</sup> *Ibid.*, at Article 10.

Protocol. While former Vice President Al Gore symbolically signed the Kyoto Protocol in December 1998, the treaty was never submitted to the Senate for ratification. At the domestic level, the USA currently has no national ETS or carbon tax in place.<sup>40</sup> The *Lieberman-McCain Climate Stewardship Act*, which was considered by the Senate in 2003, would have created a national ETS, but it was rejected in the Senate by a vote of 43 to 55.<sup>41</sup> However, in 2007, a renewed legislative effort at creating a domestic ETS was undertaken by Senators Joseph Lieberman and John Warner in their proposal of *America's Climate Security Act*. It is this legislative effort that this article will now discuss.

Despite the fact that the *Lieberman-Warner Bill* was defeated on procedural grounds in the US Senate in June 2008, analyzing the provisions of that Act is nonetheless a worthwhile endeavour for two reasons. First, it is the first proposed piece of legislation which spells out in any detail how imported products could be included in and subject to a CO<sub>2</sub> emissions trading program, and it thus provides a useful starting point for any meaningful discussion of the structure that a carbon tariff might ultimately take. Second, given that President Obama favours stronger action to fight global warming than did his predecessor,<sup>42</sup> it seems more likely that the USA will in the upcoming years take some type of meaningful action to fight climate change at the Federal level, and it seems possible that the *Lieberman-Warner Bill* will serve as a template for legislative action in this respect. This section will provide a brief overview of the operation of the emissions trading

<sup>40</sup> While the federal government has not yet enacted an emissions trading scheme, certain states have explored or implemented state-based or regional emissions trading schemes. For a concise overview of these programs, see David Harrison Jr, Per Kleinas, Albert L Nichols, and Daniel Radov, 'Using Emissions Trading to Combat Climate Change: Programs and Key Issues' 38 ELR 10367, 10374–5. For a more detailed look at the various programs undertaken by different sub-national jurisdictions within the USA, see John Byrne, Kristen Hughes, Wilson Rickerson and Lado Kurdgelashvili, 'American Policy Conflict in the Greenhouse: Divergent Trends in Federal, Regional, State, and Local Green Energy and Climate Change Policy' (2007) 35 Energy Policy 4555.

<sup>41</sup> Climate Stewardship Act of 2003, S. 139, 108th Cong. (2003). For a summary of the bill, see 'Summary of the Lieberman-McCain Climate Stewardship Act'. Pew Centre on Global Climate Change <[http://www.pewclimate.org/policy\\_center/analyses/s\\_139\\_summary.cfm](http://www.pewclimate.org/policy_center/analyses/s_139_summary.cfm)> accessed 29 July 2009. The bill was revised and reintroduced in the Senate in 2005 and again in 2007. Both times it failed to attract the requisite support from Senate. See Climate Stewardship and Innovation Act of 2005, S. 1151, 109th Cong. (2005); Climate Stewardship and Innovation Act of 2007, S. 280, 110th Cong. (2007).

<sup>42</sup> President Obama has expressed support for the implementation of a CO<sub>2</sub> emissions trading system in the United States. See, eg Barack Obama, Real Leadership for a Clean Future (8 October 2007) (transcript available online at <[http://www.barackobama.com/2007/10/08/obama\\_to\\_announce\\_new\\_plan\\_to.php](http://www.barackobama.com/2007/10/08/obama_to_announce_new_plan_to.php)>). More recently, following his election as President he indicated that he has no intention of backing down from strong measures to control greenhouse gas emissions. See John M Broder, 'Obama Affirms Climate Change Goals', *New York Times*, 18 November 2008 <<http://www.nytimes.com/2008/11/19/us/politics/19climate.html>> accessed 29 July 2009.

program proposed in that legislation as well as a more detailed analysis of how importers would be included in that scheme.

It should be noted that the Senate bills discussed here are not the most recent Federal legislative effort in the USA to enact a CO<sub>2</sub> ETS. On 26 June 2009, the House of Representatives voted, by a narrow margin of 219-212, in favour of the *American Clean Energy and Security Act of 2009*.<sup>43</sup> This bill would create a domestic CO<sub>2</sub> ETS and could see the introduction of charges on imported goods by 2020.<sup>44</sup> Despite this more recent legislative activity, this paper nonetheless focuses on and analyzes the 2007 and 2008 Senate bills mentioned above. This is because, while the Senate bills and the recently-passed House bill all contemplate carbon tariffs which have relatively similar basic structures, the earlier Senate bills have a relatively more fleshed-out carbon tariff, while the House bill is more general in this respect and leaves many specific aspects of its treatment of imports to be determined at a later date. Thus, the earlier Senate bills provide a better foil for outlining the operation of a carbon tariffs and analyzing its WTO-legality.

Finally, as a note of clarification, there are two substantially different versions of the *Lieberman Warner Act* which were examined by members of the Senate. First, Senators Joseph Lieberman and John Warner proposed a bill in late 2007 called *America's Climate Security Act*.<sup>45</sup> Subsequently, in mid-2008, Senator Barbara Boxer proposed an amendment in the nature of a substitute, the amended bill being called the *Lieberman-Warner Climate Security Act of 2008*.<sup>46</sup> While the bills are in many respects similar, there are also some key differences. The two bills will be discussed together here, and differences between the bills will be highlighted where relevant.

### *1. The provisions relating to domestically produced goods*

The basic operation of the domestic ETS is relatively similar under both bills. Under both bills, certain manufacturing and energy operations are required to submit emissions allowances (or other eligible offsets) no later than 90 days after the end of the calendar year in order to offset their greenhouse gas emissions for that year.<sup>47</sup> Although the scope of the ETS is different under the two bills, in both cases the scope is much broader

<sup>43</sup> American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009).

<sup>44</sup> *Ibid*, at §767-8.

<sup>45</sup> Lieberman-Warner Climate Security Act of 2007, S. 2191, 110th Cong. (2007) [Lieberman-Warner, 2007].

<sup>46</sup> Lieberman-Warner Climate Security Act of 2008, S. 3036, 110th Cong. (2008), Amendment in the Nature of a Substitute Intended to be Proposed by Mrs. Boxer [Lieberman-Warner, 2008].

<sup>47</sup> Lieberman-Warner, 2007 (n 45) at §1202; Lieberman-Warner, 2008 (n 46) at §202.

than is the current scope of the European ETS.<sup>48</sup> The quantity of emissions allowances for each calendar year from 2012 through 2050 is capped and declining from year to year under both bills.<sup>49</sup>

Those entities that are subject to the obligations to submit emissions allowances can satisfy that obligation in a number of ways. First, they can simply submit an appropriate number of emissions allowances. Such allowances can be acquired either through initial allocations directly to the covered entities or facilities, through various auctions of the allowances, or by purchasing or otherwise receiving an allowance from another allowance-holder.<sup>50</sup> A Congressional Research Service report comparing the two bills noted, under its assumptions, that both bills would in 2012 allocate roughly one-third of the allowance to covered entities, one-third to non-covered entities (such as states), and one-third for auctions, although the 2008 bill

<sup>48</sup> Under the 2007 bill, all ‘covered facilities’ are required to submit emissions allowances. Lieberman-Warner, 2007 (n 45) at §1202. ‘Covered facilities’ are defined in section 4(7) as:

(A) any facility within the electric power sector that contains fossil fuel-fired electricity generating units that together emit more than 10,000 carbon dioxide equivalents of greenhouse gas in any year; (B) any facility within the industrial sector that emits more than 10,000 carbon dioxide equivalents of greenhouse gas in any year; (C) any facility that in any year produces, or any entity that in any year imports, petroleum- or coal-based transportation fuel, the use of which will emit more than 10,000 carbon dioxide equivalents of greenhouse gas, assuming no capture and permanent sequestration of that gas; or (D) any facility that in any year produces, or any entity that in any year imports, nonfuel chemicals that will emit more than 10,000 carbon dioxide equivalents of greenhouse gas, assuming no capture and destruction or permanent sequestration of that gas.

Under the 2008 bill, all ‘covered entities’ are required to submit emissions allowances. Lieberman-Warner, 2008 (n 46) at §202. ‘Covered entities’ are defined in section 4(16) as: ‘(A) any entity that, during a 1-year period, uses more than 5,000 metric tons of coal in the USA; (B) any entity that is a natural gas processing plant in the USA (other than in the State of Alaska); (C) any entity that produces natural gas in the State of Alaska or the Federal waters of the Alaska Outer Continental Shelf; (D) any entity that holds title to natural gas, including liquefied natural gas, at the time the natural gas is imported into the USA; (E) any entity that manufactures in the USA petroleum-based liquid or gaseous fuel, petroleum coke, or coal-based liquid or gaseous fuel, the combustion of which will, assuming no sequestration, emit a non-HFC greenhouse gas; (F) any entity that holds title, at the time of importation into the USA, to petroleum-based liquid or gaseous fuel, petroleum coke, or coal-based liquid or gaseous fuel, the combustion of which will, assuming no sequestration, emit a non-HFC greenhouse gas; (G) any entity that, during a 1-year period, manufactures more than 10,000 carbon dioxide equivalents of non-HFC greenhouse gas in the USA; (H) any entity that, during any 1-year period, holds title, at the time of importation into the USA, to more than 10,000 carbon dioxide equivalents of non-HFC greenhouse gas; or (I) any entity that manufactures any hydrochlorofluorocarbon in the USA.’

<sup>49</sup> Lieberman-Warner, 2007 (n 45) at §1201; Lieberman-Warner, 2008 (n 46) at §201.

<sup>50</sup> Both bills specify that emissions allowances may be sold, exchanged, or transferred, and that ‘the privilege of purchasing, holding, selling, exchanging, and retiring emission allowances shall not be restricted to owners and operators’ of covered entities or facilities. Lieberman-Warner, 2007 (n 45) §2101; Lieberman-Warner, 2008 (n 46) at §401.

would allocate slightly more of the allowances to non-covered entities.<sup>51</sup> Second, covered entities can borrow emission allowances from the regulatory agency overseeing the program in order to meet up to 15% of their compliance obligation.<sup>52</sup> The emissions allowances must eventually be repaid with interest.<sup>53</sup> Third, covered entities can submit offset allowances in order to meet up to 15% of their compliance obligation.<sup>54</sup> These offset allowances can be obtained through a variety of projects to reduce the quantity of greenhouse gases coming from other sources or through carbon sequestration projects.<sup>55</sup> Fourth, under both bills, covered entities can submit certain international allowances or credits in order to meet their compliance obligations.<sup>56</sup>

## 2. *The provisions relating to imports*

From the viewpoint of international trade law, the most interesting and contentious provisions of the bills are those that require importers to purchase emissions allowances to cover the CO<sub>2</sub> emissions which were emitted in the course of the production in the state where the good was produced. Because these provisions represent the most concrete legislative attempt thus far to include imported goods in a domestic ETS, the structure of these provisions will now be examined in some detail.

Although the language is different between the 2007 and the 2008 bills, the basic structure of the scheme applicable to imported goods is similar. Beginning in either 2014 (under the 2008 bill) or 2020 (under the 2007 bill), importers of 'covered goods' from foreign countries on the 'covered list' must provide a sufficient number of 'international reserve allowances'—or, under the 2008 bill, they can elect to provide cash or securities sufficient to cover the purchase of such allowances—to meet their obligations set out under the bill.<sup>57</sup> Although this basic structure is fairly clear, understanding the trade law implications of this requirement necessitates answering four questions about how this basic structure is implemented. First, what are

<sup>51</sup> CRS Report for Congress, 'Climate Change: Comparison of S. 2191 as Reported (now S. 3036) with Proposed Boxer Amendment' (30 May 2008) <<http://ncseonline.org/NLE/CRSreports/08Jun/RL34515.pdf>> accessed 29 July 2009.

<sup>52</sup> Lieberman-Warner, 2007 (n 45) §2301; Lieberman-Warner, 2008 (n 46) at §511.

<sup>53</sup> Lieberman-Warner, 2007 (n 45), §2303; Lieberman-Warner, 2008 (n 46), at §513. Under the 2008 bill, for example, there is an effective annual compound rate of interest of 10% on the emissions allowances, in that when the emissions allowances are repaid, the number of emissions allowances returned must be equal to  $(1.1)^n x$ , where  $n$  is the number of the years for which the allowances were borrowed and  $x$  is the number of allowances borrowed.

<sup>54</sup> Lieberman-Warner, 2007 (n 45) at §2402; Lieberman-Warner, 2008 (n 46) at §302.

<sup>55</sup> Lieberman-Warner, 2007 (n 45) at §2401–11; Lieberman-Warner, 2008 (n 46) at Title III.

<sup>56</sup> Lieberman-Warner, 2007 (n 45) at §2501; Lieberman-Warner, 2008 (n 46) at §322. Under the 2007 bill, international allowances could only be submitted to cover 15% of a covered entity's compliance obligation. This 15% restriction was removed in the 2008 version of the bill.

<sup>57</sup> Lieberman-Warner, 2007 (n 45) at §6006(c); Lieberman-Warner, 2008 (n 46) at §1306(c).

‘covered goods’? Second, what foreign countries are on the ‘covered list’? Third, how are international reserve allowances priced? Fourth, how is the quantity of allowances required for particular goods from particular countries determined? These questions will each be addressed in turn.

(a) *Defining ‘covered goods’* As noted above, the requirement to purchase international reserve allowances is restricted to imports of ‘covered goods.’ While the term ‘covered good’ is defined in the bill in a way which gives some degree of certainty to whether particular goods fall into this category, the definition is by no means perfectly clear. The definition of ‘covered goods’ varies somewhat between the two versions of the bill, and only the latter (and slightly broader) definition from the 2008 bill will be outlined here.<sup>58</sup> In that bill, a ‘covered good’ is a good that:

- (A) is a primary product or manufacturing item for consumption;
- (B) generates, in the course of the manufacture of the good, a substantial quantity of direct greenhouse gas emissions or indirect greenhouse gas emissions; and
- (C) is closely related to a good the cost of production of which in the United States is affected by a requirement of this Act.<sup>59</sup>

‘Primary products’ and ‘manufacturing items for consumption’ are also both defined in the legislation.<sup>60</sup>

<sup>58</sup> The definition of ‘covered good’ in the 2007 bill can be found at Lieberman-Warner, 2007 (n 45) at §6001(5) of that bill.

<sup>59</sup> Lieberman-Warner, 2008 (n 46) at §1301(7).

<sup>60</sup> ‘Primary product’ means:

- (A) iron, steel, steel mill products (including pipe and tube), aluminum, cement, glass (including flat, container, and specialty glass and fiberglass), pulp, paper, chemicals, or industrial ceramics; and
- (B) any other manufactured product that—
  - (i) is sold in bulk for purposes of further manufacture or inclusion in a finished product; and
  - (ii) generates, in the course of the manufacture of the product, direct green house gas emissions or indirect greenhouse gas emissions that are comparable (on an emissions-per-output basis) to emissions generated in the manufacture of products by covered entities in the industrial sector.

‘Manufacturing item for consumption’ is defined as ‘any good or product:’

- (A) that is not a primary product;
- (B) that generates, in the course of the manufacture, a substantial quantity of direct greenhouse gas emissions or indirect greenhouse gas emissions, including emissions attributable to the inclusion of a primary product in the manufactured item for consumption; and
- (C) for which the Commission, in consultation with the Administrator, determines that the application of an international reserve allowance requirement under section 1306 to the particular category of goods or products is administratively feasible and necessary to achieve the purposes of this subtitle.

While it is not necessary to examine in detail the specifics of the definition of ‘covered goods’, it should be noted that this definition is exceptionally broad. The definitions of ‘primary product’ and ‘manufacturing item for consumption’ indicate that there are no goods which are categorically exempted from the requirement to purchase international reserve allowances. Rather, the major constraint on the scope of the term ‘covered goods’ rests on the interpretation of ‘comparable’ in section 1301(15) and ‘substantial’ in section 1301(13).

Additionally, it is important to note that this scheme extends the US ETS further with respect to importers than it does with respect to domestic producers in one important respect. US manufacturers are not subject to the ETS provided that they produce less than 10,000 carbon dioxide equivalents in any given year.<sup>61</sup> By contrast, some relatively small importers who produce less than 10,000 carbon dioxide equivalents in any given year could still be subject to the compliance obligation. In practice, this difference may prove to be largely irrelevant, as the threshold of 10,000 tonnes of carbon dioxide equivalents is a relatively low threshold.

(b) *Foreign countries on the ‘covered list’* While only imports of ‘covered goods’ are subject to the requirement to purchase international reserve allowances, the scope of this obligation is further limited to only such goods from foreign countries on the ‘covered list.’ Thus, imports from countries not on the ‘covered list’ are not subject to the obligation to purchase international reserve allowances. This aspect of the *Lieberman-Warner Bill prima facie* raises issues of WTO-legality, as it necessarily implies discriminatory treatment of imports from particular countries of origin.

Under section 1306(b)(3)(B) of the 2008 bill, the covered list includes all countries which are not specifically excluded from the list under section 1306(b)(2).<sup>62</sup> Under section 1306(b)(2)(A), three classes of countries are excluded from the covered list:

- (i) each foreign country determined by the Commission under section 1305(a) to have taken action comparable to that taken by the United States to limit the greenhouse gas emission of the foreign country;
- (ii) each foreign country identified by the United Nations as among the least-developed developing countries; and
- (iii) each foreign country the share of total global greenhouse gas emissions of which is below the de minimis percentage described in subparagraph (B) [0.5 percent].<sup>63</sup>

<sup>61</sup> Ibid, at §4(16)(G).

<sup>62</sup> Ibid, at §1306(b)(3)(B).

<sup>63</sup> Ibid, at §1306(b)(2).

While the meaning of the second and third categories is relatively clear, the first category requires some explanation, as it is not immediately clear when a country has taken ‘comparable action’ which satisfies this requirement.

To determine whether a country has taken ‘comparable action,’ Section 1304 creates an ‘International Climate Change Commission,’<sup>64</sup> which is required under Section 1305(a) to determine each year whether a country ‘has taken comparable action to limit the greenhouse gas emission of the foreign country, based on the best available information and a comparison between’ the actions carried out by the foreign country over the previous calendar year and the actions carried out by the USA over the previous calendar year.<sup>65</sup> This requirement relies heavily on the definition of ‘comparable action,’ which is defined in Section 1301(4) and, because of the importance of that term, is worth reproducing in full here:

- (A) In general.—The term “comparable action” means any greenhouse gas regulatory programs, requirements, and other measures adopted by a foreign country that, in combination, are comparable in effect to actions carried out by the United States through Federal, State, and local measures to limit greenhouse gas emissions, as determined by the Commission in accordance with subparagraph (B).
- (B) Requirements.—For purposes of subparagraph (A), the Commission shall make a determination on whether a foreign country has taken comparable action for a particular calendar year based on the best available information and in accordance with the following requirements:
  - (i) A foreign country shall be considered to have taken comparable action if the Commission determines that the percentage change in greenhouse gas emissions in the foreign country during the relevant period is equal to or greater than the percentage change in greenhouse emissions of the United States during that period.
  - (ii) In the case of a foreign country that is not considered to have taken comparable action under clause (i), the Commission shall take into consideration, in making a determination on comparable action for that foreign country, the extent to which, during the relevant period, the foreign country has implemented, verified, and enforced each of the following:
    - (I) The deployment and use of state-of-the-art technologies in industrial processes, equipment manufacturing facilities, power generation and other energy facilities, and consumer

<sup>64</sup> *Ibid.*, at §1304(a).

<sup>65</sup> *Ibid.*, at §1305(a).

goods (such as automobiles and appliances), and implementation of other techniques or actions, that have the effect of limiting greenhouse gas emissions of the foreign country during the relevant period.

- (II) Any regulatory programs, requirements, and other measures that the foreign country has implemented to limit greenhouse gas emissions during the relevant periods.<sup>66</sup>

In sum, a country will be deemed to have taken ‘comparable action’ under two circumstances. First, it will have taken comparable action if it has either reduced its greenhouse gas emissions by an equal or greater percentage than has the USA. Second, even if a country has not reduced its greenhouse gas emissions by an equal or greater percentage than has the USA over the previous year, the Commission retains the discretion to determine that a country has taken comparable action by assessing the extent to which that country has employed green technology and implemented regulatory programs to curb the reduction in greenhouse gas emissions.

Two features of this definition are worth noting. First, it is important to note that this definition imposes very few requirements on the form that a state’s actions must take in reducing greenhouse gases in order to be considered ‘comparable action.’ For example, there is no requirement that a country implement a particular type of regulatory program, such as an ETS, for it to be eligible to be deemed to have taken comparable action. Second, there is no room, at least in the plain language of the provision, for the Commission to consider the degree of economic development of the foreign country in its determination of whether that country has taken comparable action. This is a change from the 2007 version of the bill, in which ‘comparable action’ was determined with references to the actions taken by the country to limit greenhouse gas emissions, ‘taking into consideration the level of economic development of the foreign country.’<sup>67</sup>

(c) *Pricing international reserve allowances* Having examined above which imported goods are subject to the obligation to be accompanied by international reserve allowances, the question arises as to how those allowances are to be priced. Unlike the above issues, this question can be addressed easily. Section 1306(a)(4)(B)(ii) indicates that the price of international reserve allowances is to be set daily ‘in an amount equal to . . . the market clearing price for an allowance for the preceding day pursuant to section 201(a),’<sup>68</sup> where that price is determined as the arithmetic mean of ‘3 leading publicly reported price indices for the sale of emission allowances

<sup>66</sup> Ibid, at §1301(4).

<sup>67</sup> Lieberman-Warner, 2007 (n 45) at §6001(2).

<sup>68</sup> Lieberman-Warner, 2008 (n 46) at §1306(a)(4)(B)(ii).

established pursuant to section 201(a)'.<sup>69</sup> Thus, the price of international reserve allowances should be roughly the same as the price of domestic emissions allowances.

While the price paid on any given day for domestic emission allowances and international reserve allowances is roughly equal, it should be noted that there is a difference between domestic producers and importers in terms of when those allowances need to be submitted to the Commission. While domestic producers are required to submit their allowances within ninety days after the end of the preceding calendar year for their emissions over the course of that year,<sup>70</sup> importers must deposit international reserve allowances at the time the goods are imported.<sup>71</sup> Additionally, domestic producers can borrow up to 15% of the emission allowances that they are obligated to surrender in any given year from the Commission,<sup>72</sup> while importers are unable to do this. Thus, domestic producers have more flexibility in terms of timing their purchase of emission allowances than do importers. While the price of the emissions is the same, this may effectively impose a greater burden on importers than domestic producers.

(d) *Determining the quantity of allowances required* The final issue presented by the above statutory scheme is the question of the number of international reserve allowances that an importer is required to purchase for a particular set of imports. Section 1306(d)(2) of the 2008 bill provides a general formula for the calculation of the number of international reserve allowances required:

(2) General formula.—The quantity of international reserve allowances required to be submitted for a compliance year... shall be the product obtained by multiplying—

(A) the national greenhouse gas intensity rate for each category of covered goods of each covered foreign country for the compliance year, determined by the Administrator under paragraph (3);

(B) the allowance adjustment factor for the industry sector of the covered foreign country that manufactured the covered goods entered into the United States, as determined by the Administrator under paragraph (4); and

(C) the economic adjustment ratio for the covered foreign country, as determined by the Commission under paragraph (5).<sup>73</sup>

Each of these factors has important implications for international trade law and thus merits consideration below.

<sup>69</sup> *Ibid.*, at §1306(a)(4)(B)(i).

<sup>70</sup> *Ibid.*, at §202.

<sup>71</sup> *Ibid.*, at §1306(c)(3)(D).

<sup>72</sup> *Ibid.*, at §511.

<sup>73</sup> *Ibid.*, at §1306(d)(2).

The first factor listed in the formula is the national greenhouse gas intensity rate. This factor is determined by dividing

- (A) the total quantity of direct greenhouse gas emissions and indirect greenhouse gas emissions that are attributable to a category of covered goods of a covered foreign country during the most recent calendar year (as adjusted to exclude those emissions that would not be subject to the allowance submission requirements of section 202 for the category of covered goods if manufactured in the United States); by
- (B) total number of units of the covered good that are produced in the covered foreign country during that calendar year.<sup>74</sup>

The noteworthy aspect of this factor is that the determination of the number of international reserve allowances that an importer of covered goods must purchase is not based on the actual greenhouse gas emissions emitted by the producer in the production of that particular good. Rather, it is based on average greenhouse gas emissions emitted by all producers in that country in the course of the production of that category of goods. Thus, while domestic producers are required to purchase emissions allowances commensurate with their own greenhouse gas emissions, imported goods need to be accompanied by allowances which are incommensurate with their producers' actual greenhouse gas emissions. Additionally, while 'category of covered goods' is undefined in the legislation, the language obviously implies that multiple goods are grouped into particular categories. This means that the quantity of allowances that importers are required to purchase depends not only on the average greenhouse gas emissions of producers in the course of production of that particular good, but also on the greenhouse gas emissions emitted by producers in the production of other goods within the same category.

The second factor taken into account in this formula is an allowance adjustment factor for a particular industry group. The actual calculation of this factor is rather technical and unimportant for the purposes of this article.<sup>75</sup> It is sufficient to note that this factor is meant to adjust downward the number of allowances that importers are required to purchase in order to compensate for the fact that domestic facilities covered by the scheme would have been allocated a certain number of allowances at no cost. This adjustment thus ensures that, aggregating across a particular category of goods, imported goods bear the same total cost for the allowances as would those domestically-produced goods in that category for a given quantity of greenhouse gas emissions.

<sup>74</sup> Ibid, at §1306(d)(3).

<sup>75</sup> Ibid, at §1306(d)(4).

The third factor included in the formula is an economic adjustment ratio. Section 1306(d)(5) stipulates that this factor is to be one unless the Commission decides to decrease it on the basis that the foreign country has undertaken technological or regulatory steps to reduce their greenhouse gas emissions.<sup>76</sup> The language of this provision is virtually identical to the language used in the definition of ‘comparable action’ in section 1301(4)(b)(ii). This means that even if a country has not taken sufficient steps to reduce greenhouse gas emissions to be considered to have taken comparable action under section 1301(4)(b)(ii) and thus be exempted entirely from the requirement to purchase international reserve allowances under section 1306(b)(2), its producers may still receive what amounts to a discount on the number of allowances that they are required to purchase based on the steps that the country has taken.

#### IV. THE WTO-LEGALITY OF THE PROPOSED MEASURES

Having outlined certain proposals for carbon tariffs in the EU and the USA, this article now proceeds to consider the WTO-legality of such carbon tariffs. Two distinct issues must be analyzed in determining the WTO-legality of carbon tariffs. First, are carbon tariffs categorically impermissible? Second, assuming that carbon tariffs are not categorically impermissible, what requirements apply to the structure of carbon tariffs in order to make them compliant with WTO law? This second issue will be addressed primarily through an examination of the WTO-legality of the *Lieberman-Warner Bill*.

##### A. A threshold issue: carbon tariffs and border tax adjustments under the GATT

While the subsequent section will address the particular characteristics that a carbon tariff would need to possess in order to accord with the provisions of the GATT and other international trade-related agreements, this section addresses a more fundamental threshold question. A carbon tariff could be characterized as a charge either on the imported good itself or on the CO<sub>2</sub> emitted in the production of that good. While the latter characterization (i) is likely a more accurate description of the operation of a carbon tariff and (ii) avoids certain legal problems discussed later in this article arising from the former characterization, a fundamental issue arises in terms of whether taxes of the latter type are categorically prohibited under WTO rules. As will be seen in this section, while the imposition of taxes on imported goods *qua* goods is not in and of itself impermissible, is not clear that the imposition of taxes on imports which are in effect taxes corresponding to the CO<sub>2</sub>

<sup>76</sup> *Ibid.*, at §1306(d)(5).

emissions generated in the production of those goods is permissible under current WTO rules.

Thus, this section will examine the validity of the latter characterization and examine whether a charge imposed on imports which is in essence a charge on the CO<sub>2</sub> emitted in their production would be permissible *in any form* under current WTO rules. This section will conclude that while carbon tariffs may be permissible under current WTO rules, this result is by no means obvious and would potentially require a justification of their permissibility under Article XX(g) of the GATT.

### *1. The types of taxes amenable to border tax adjustment*

As noted above, the essence of carbon tariffs—particularly those being examined by the EU and the USA—is that they are measures which are designed to force importers of goods to bear the same charge for emitting a given quantity of CO<sub>2</sub> in the course of production of those goods as do domestic producers. Thus, what have been thus far referred to in this article as carbon tariffs are not actually tariffs designed to impose additional burdens on importers, but rather merely to ensure that an equal charge on a particular activity is born by domestic and foreign producers. As will be discussed below, such equalization of taxes on domestic and imported goods is, in general, explicitly permitted in the GATT 1947.<sup>77</sup> To this effect, countries frequently make use of ‘border tax adjustments’, which include any ‘fiscal measure...which enable[s] imported products sold to consumers to be charged with some or all of the tax charged in the importing country in respect of similar domestic products.’<sup>78</sup> However, there are certain restrictions on the types of taxes which are amenable to adjustment under the WTO’s rules on border tax adjustments. The question that this section will address is whether a levy on the CO<sub>2</sub> emissions generated in the production of a product is the type of charge which can permissibly be adjusted under WTO border tax adjustment rules.

The starting point for analyzing the permissibility of the border tax adjustments is the text of the GATT 1947. Article II:2 specifically indicates that parties are free to impose ‘at any time on the importation of any product: (a) a charge equivalent to an internal tax imposed consistently with the provisions of paragraph 2 of Article III in respect of the like domestic product or in respect of an article from which the imported product has been manufactured or produced in whole or in part.’<sup>79</sup> This section

<sup>77</sup> *General Agreement on Tariffs and Trade*, 30 October 1947, at Articles II:2 and III:3 [*GATT* 1947]. While the *GATT* 1947 was incorporated into the General Agreement on Tariffs and Trade 1994, footnotes below will continue to refer to the *GATT* 1947.

<sup>78</sup> Report of the Working Party on Border Tax Adjustments, L/3463 (adopted 2 December 1970), at para 4 [Working Party Report].

<sup>79</sup> *GATT* 1947 (n 77) at Article II:2. The additional requirement in Article II:2 that the charges be consistent with Article III:2 places few restrictions on the taxes which are amenable to

thus specifies that for a tax to be adjustable at the border, it must be ‘in respect of’ either (i) the imported product, or (ii) an ‘article from which the imported product [was] manufactured’.

Other documents since the GATT 1947 have placed additional limitations on the types of taxes which are amenable to border tax adjustments. The principal source of clarification on this issue is the Report of the Working Party on Border Tax Adjustments, which was adopted by the GATT membership on 2 December 1970.<sup>80</sup> While this document is a working party report which merely examines issues and does not purport to have binding legal effect, subsequent to its adoption by the GATT membership it has been cited by various GATT and WTO panels,<sup>81</sup> and, at least where the Report makes relatively unambiguous conclusions, it has been accepted as authoritative.

In paragraph 14 of the Report, the Working Party places a limitation on the types of taxes which are eligible for border tax adjustments. Indirect taxes, such as ‘specific excise duties, sales taxes and cascade taxes and the tax on value added’ are amenable to border tax adjustments.<sup>82</sup> By contrast, direct taxes, such as social security charges or payroll taxes, are not eligible for border tax adjustments.<sup>83</sup> In paragraph 15 of its Report, the Working Party recognized that there was divergence of views with respect to the eligibility of ‘*taxes occultes*’—i.e. ‘consumption taxes on capital equipment, auxiliary materials and services used in the transportation and production of other taxable goods’—for border tax adjustments.<sup>84</sup> A tax on energy was specifically listed as an example of *taxes occultes*. While the Working Party noted that ‘adjustment was not normally made for *taxes occultes*,’ the Report did not categorically exclude them as eligible for border tax adjustments.<sup>85</sup> Charges on CO<sub>2</sub> emissions do not obviously fall into the types of direct or indirect taxes listed in paragraph 14 of the report, but rather would most likely be characterized as *taxes occultes*. Thus, while the Working Party Report provided some clarification to the types of taxes eligible for border tax adjustments, it did not provide a clear answer to the eligibility of taxes on CO<sub>2</sub> emissions for adjustment.

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border tax adjustments, as Article III:2 deals with ‘internal taxes or other internal charges of any kind.’

<sup>80</sup> Working Party Report (n 78).

<sup>81</sup> See, eg GATT Panel Report, *United States – Taxes on Petroleum and Certain Imported Substances*, L/6175 – 34S/136, adopted 17 June 1987 [*United States – Superfund*]; Panel Report, *Argentina – Measures Affecting the Export of Bovine Hides and the Imported of Finished Leather*, WT/DS155/R, adopted 16 February 2001 [*Argentina – Bovine Hides*].

<sup>82</sup> Working Party Report (n 78) at para 14.

<sup>83</sup> *Ibid*, at para 14.

<sup>84</sup> *Ibid*, at para 15.

<sup>85</sup> *Ibid*, at para 15.

While there has been little litigation which has clarified the scope of these provisions, the GATT Panel Decision in *United States – Taxes on Petroleum and Certain Imported Substances [Superfund]* provides some support for the notion that charges on CO<sub>2</sub> emissions may be eligible for border tax adjustments. In that case, the GATT panel considered complaints about the US *Superfund Act* which, *inter alia*, imposed taxes on certain chemicals as well as on imported products which were produced using a substantial quantity of those chemicals.<sup>86</sup> The tax on the imported substances was intended to be equal to ‘to amount of the tax which would have been imposed under the Superfund Act on the chemicals used as materials in the manufacture or production of the imported substance if the taxable chemicals had been sold in the USA for use in the manufacture or production of the imported substance’.<sup>87</sup> The GATT panel held that the tax on the imported substances was eligible for border tax adjustments.<sup>88</sup> This decision suggests that taxes applied to imported products based on the quantity of intermediate products used in the production of the imported product are in principle eligible for border tax adjustments. This reasoning might also suggest that charges based on the amount of CO<sub>2</sub> emitted in the production of a good might also be eligible for border tax adjustments.

However, this reasoning may not apply equally to charges based on CO<sub>2</sub> emissions. Bierman and Brohm suggest that the reference in Article II:2(a) of the GATT to ‘articles from which the imported product has been manufactured’ means that taxes can only be levied on intermediate products which are physically incorporated into the imported product.<sup>89</sup> They similarly note that the panel in the *Superfund* case did not indicate whether the chemicals needed to be incorporated into the final product in order for the charge to be considered an eligible border tax adjustment, thereby leaving it an open question whether taxes on intermediate products which are used in the production of a good but are not physically incorporated into the final good are eligible for border tax adjustment.<sup>90</sup> This critique does not necessarily mean that CO<sub>2</sub> emissions are not amenable to border tax adjustment, but it does provide a means of distinguishing the *Superfund* case from the case of carbon tariffs.

However, even assuming that Bierman and Brohm’s concern is overcome and the good in question need not be physically incorporated into the final product in order to be eligible for border tax adjustment, an additional

<sup>86</sup> *United States – Superfund* (n 81) at paras 2.3 and 2.4.

<sup>87</sup> *Ibid*, at para 2.5.

<sup>88</sup> *Ibid*.

<sup>89</sup> Biermann and Brohm (n 3) at 252. For a more detailed discussion of the amenability of taxes on energy to border tax adjustment under WTO rules, see Christian Pitschas, ‘GATT/WTO Rules for Border Tax Adjustments and the Proposed European Directive Introducing a Tax on Carbon Dioxide Emissions and Energy’ (1994) 24 *Georgia J Int Comp L* 479.

<sup>90</sup> Biermann and Brohm (n 3) at 252.

problem remains with charges on CO<sub>2</sub> emissions. The emissions allowances in the European ETS and the *Lieberman-Warner Bill* are not charges on ‘articles from which the imported product has been manufactured,’ but rather are charges on by-products of the manufacturing process. Thus, even if a product like energy, which is not physically incorporated into an imported good but is used in the production of that imported good, is eligible for border tax adjustment, it is by no means clear that the charges on the by-products of that intermediate product are similarly eligible. While charges on by-products of the production process are not specifically excluded from tax adjustment, they are certainly not made explicitly eligible for border tax adjustments in any WTO treaty or panel decision.

The Agreement on Subsidies and Countervailing Measures (SCM Agreement), agreed to in 1994, provides some additional albeit indirect support for this reasoning. Although the SCM Agreement deals with subsidies, to the extent it addresses the permissibility of border tax adjustments in the context of exports, it could be argued that symmetry requires that those types of taxes which are eligible for remission upon export of domestically produced products ought also to be eligible for collection on the import of foreign-produced products. Thus, it may be relevant to the issue of border tax adjustments generally, especially given the paucity of legal authority directly on point.

Paragraph 1 of Annex II of the SCM Agreement indicates that ‘[i]ndirect tax rebate schemes can allow for exemption, remission or deferral of prior-stage cumulative indirect taxes levied on inputs that are consumed in the production of the exported product’.<sup>91</sup> While it is arguable that a charge on CO<sub>2</sub> emissions meets the definition of a prior-stage cumulative indirect tax,<sup>92</sup> it is more difficult to argue that they are ‘levied on inputs that are consumed in the production of the exported product’. ‘Inputs consumed in the production process’ are defined in footnote 61 of the SCM Agreement as ‘inputs physically incorporated, energy, fuels and oil used in the production process and catalysts which are consumed in the course of their use to obtain the exported product’.<sup>93</sup> This suggests that taxes on CO<sub>2</sub> emissions would not be adjustable at the border.

<sup>91</sup> Agreement on Subsidies and Countervailing Measures, Annex II, para 1 [SCM Agreement].

<sup>92</sup> The definition of the terms used in that phrase are provided in footnote 57 of the SCM Agreement: ‘The term ‘direct taxes’ shall mean taxes on wages, profits, interests, rents, royalties, and all other forms of income, and taxes on the ownership of real property... The term ‘indirect taxes’ shall mean sales, excise, turnover, value added, franchise, stamp, transfer, inventory and equipment taxes, border taxes and all taxes other than direct taxes and import charges; ‘Prior-stage’ indirect taxes are those levied on goods or services used directly or indirectly in making the product; ‘Cumulative’ indirect taxes are multi-staged taxes levied where there is no mechanism for subsequent crediting of the tax if the goods or services subject to tax at one stage of production are used in a succeeding stage of production.’ *Ibid.*

<sup>93</sup> *Ibid.*, at footnote 61. In Article II:3 of Annex II of the SCM Agreement, the definitions of ‘inputs physically incorporated’ limited to those that ‘are used in the production process and

If this interpretation is correct, the current rules on border tax adjustments only permit countries to equalize taxes on imported products, intermediate products used in the production of those imported products, and potentially the energy used in the production of the imported product, but not to equalize taxes on the CO<sub>2</sub> emissions generated in the production of the product.<sup>94</sup> The US scheme of requiring importers to purchase international reserve allowances would likely violate this requirement, as the number of international reserve allowances that an importer is required to purchase is calculated in such a way to effectively equalize the charges applied to importers and domestic producers for a particular quantity of CO<sub>2</sub> emitted in the production of the product. Of course, it is by no means clear that this interpretation is correct, as there is no clear statement in any WTO treaty or jurisprudence which explicitly excludes taxes like carbon taxes from border tax adjustment, and the Working Party Report provides at least some basis for arguing that carbon taxes are amenable to border tax adjustment. However, this ambiguity suggests that there is at least a potential conflict between the very nature of carbon tariffs and current WTO rules.

## 2. *The permissibility of carbon tariffs under Article XX(g)*

Provided that taxes on CO<sub>2</sub> emissions are not amenable to border tax adjustment, countries may still be able to argue that they are nonetheless permitted under Article XX(g).<sup>95</sup> This argument would likely be relatively persuasive, since at this stage only the threshold question of the eligibility of charges

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are physically present in the product exported,' though it also specifies 'that an input need not be present in the final product in the same form in which it entered the production process.'

<sup>94</sup> From a policy standpoint, the prohibition on the equalization of charges for CO<sub>2</sub> emissions implied by this interpretation would not allow countries to employ carbon tariffs to their optimal effectiveness. Under this interpretation, countries would be limited to equalizing the taxes levied on particular products or inputs. The best policy option countries could implement given this constraint would be to levy uniform charges for both domestic producers and importers on particular products and inputs that generally result in high CO<sub>2</sub> emissions in the course of production of the products. While this policy might result in some CO<sub>2</sub> abatement based on consumers' substitution away from those products due to their higher cost and the consequent decreased production of those products, it would provide no incentive for producers of those products to abate emissions, as their products would be subject to the same taxes irrespective of the CO<sub>2</sub> emissions generated in the course of their production.

<sup>95</sup> *GATT* 1947 (n 77) at Article XX(g). While the argument that carbon tariffs are permitted under Article XX(g) might be a feasible solution, one threshold problem that could arise is that Article XX only provides exceptions to the substantive provisions of the *GATT* 1947, while the prohibition on applying border tax adjustments to certain types of taxes stems from the Report on the Working Party on Border Tax Adjustments. However, this problem would be overcome if the Working Party Report is viewed as an interpretation of the substantive provisions of the *GATT*.

based on CO<sub>2</sub> emissions for border tax adjustment would be at issue. The relevant provision of the GATT reads as follows:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.<sup>96</sup>

The Appellate Body has held that determining whether a violation of a provision of the GATT is permitted under Article XX is a two-stage process. First, it must be determined whether a measure is provisionally justified under one of the particular exceptions listed in paragraphs (a) through (j). Second, if the measure is provisionally justified, it must be determined whether it is in accordance with the Chapeau of Article XX.<sup>97</sup>

At the first stage, there are three criteria that must be satisfied for a measure to be provisionally justified under paragraph (g) of Article XX. First, the resource to which the measure relates must be an exhaustible natural resource. Second, the measure must relate to the conservation of the exhaustible natural resource. Third, the measure must be made effective in conjunction with restrictions with domestic production or consumption. Each of these three criteria can be relatively easily satisfied in the case of carbon tariffs.

On the first criterion, it seems likely that an atmosphere without excessive amounts of CO<sub>2</sub> can be characterized as an exhaustible natural resource. Clean air was characterized as an exhaustible natural resource by the Appellate Body in the *US-Gasoline* case, and there does not seem to be any reason not to similarly characterize it here.<sup>98</sup> Additionally in *US-Shrimp*, the Appellate Body held that the words 'exhaustible natural resources' 'must be read by a treaty interpreter in light of contemporary concerns of the community of nations about the protection and conservation of the environment'.<sup>99</sup> Given that anthropogenic climate change is perhaps

<sup>96</sup> GATT 1947 (n 77) at Article XX.

<sup>97</sup> Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, adopted 20 May 1996 [*US – Gasoline*, AB]; Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, adopted 6 November 1998 [*US – Shrimp*]. For a useful introduction to WTO decisions relating to environmental protection measures, see Steve Charnovitz, 'The WTO's Environmental Progress' (2007) 10 *JIEL* 685.

<sup>98</sup> *US – Gasoline*, AB, *ibid*.

<sup>99</sup> *US – Shrimp* (n 97), at para 129.

the predominant contemporary environmental concern, it seems likely the first criterion would be satisfied.

The second criterion requires an assessment of 'the relationship between the measure at stake and the legitimate policy of conserving natural resources'.<sup>100</sup> For the policy reasons addressed above, it seems likely that this criterion can be satisfied. Carbon tariffs bear a direct relation to the reduction of CO<sub>2</sub> emissions, as they (i) raise the cost for foreign polluters of emitting CO<sub>2</sub>, thereby encouraging them to reduce their CO<sub>2</sub> emissions, and (ii) prevent the 'leakage' of CO<sub>2</sub> emissions caused by firms relocating to jurisdictions that do not impose charges on firms' emissions of CO<sub>2</sub>. Additionally, in *US-Shrimp*, the Appellate Body held that a provision designed to influence countries to adopt regulatory measures relating to shrimp fishing which would minimize the damage done to sea turtles was directly connected with the conservation of sea turtles.<sup>101</sup> Carbon tariffs similarly influence foreign countries to adopt measures to lessen their CO<sub>2</sub> emissions and should thus, using the same reasoning as in *US-Shrimp*, be sufficiently connected to the goal of reducing CO<sub>2</sub> emissions to satisfy the second requirement.

The final criterion is that the measure must be made effective in conjunction with restrictions with domestic production or consumption. This criterion requires that the government be 'even-handed' and apply similar measures to both domestic and foreign producers.<sup>102</sup> In this case, the measure sought to be justified under Article XX(g) is a particular type of border tax adjustment, meaning that domestic producers are also subject to the charge in question. Indeed, carbon tariffs are intended to complement domestic measures taken to reduce CO<sub>2</sub>. Thus, it seems likely that the third criterion for provisional justification would also be satisfied.

Provided that carbon tariffs are provisionally justified under paragraph (g) of Article XX, the next stage of the analysis requires a determination as to whether the measure in question is justified under the chapeau of Article XX. However, a detailed analysis of the requirements of the chapeau is unnecessary at this stage, as this stage of the analysis is only concerned with whether carbon tariffs are categorically impermissible under the GATT, not with whether any particular carbon tariff is justifiable under the chapeau of Article XX. The issue of whether a carbon tariff constitutes either an 'arbitrary or unjustifiable discrimination between countries where the same conditions prevail' or a 'disguised restriction on international trade' depends on the characteristics of the particular carbon tariff.<sup>103</sup> The question of what restrictions the GATT places on the permissible form of carbon tariffs

<sup>100</sup> Ibid, at para 135.

<sup>101</sup> Ibid, at paras 138 and 140.

<sup>102</sup> *US - Gasoline*, AB (n 97) at 21; *US - Shrimp*, *ibid*, at paras 143-4.

<sup>103</sup> *GATT 1947* (n 77) at Article XX; *US - Shrimp*, *ibid*, at para 150.

is postponed to following section. Thus, a determination that carbon tariffs would likely be provisionally justified under paragraph (g) of Article XX is sufficient to conclude that carbon taxes are not categorically prohibited by the GATT.

### *3. Conclusion on the threshold issue*

The above analysis suggests that it is likely that carbon tariffs do not necessarily violate the GATT. They might be permitted under the current legal framework regarding border tax adjustments, though this seems unlikely. However, if they are not permitted under this framework, they might still be permitted under Article XX(g) of the GATT. However, two comments bear noting at this point. First, as noted above, this section only dealt with the issue of the categorical impermissibility of carbon tariffs. No conclusions were made in this section regarding the constraints that WTO law places on the structure of carbon tariffs; those issues are addressed in the following section.

Second, and perhaps more importantly, it is important to note that the manner in which carbon tariffs are found to be permissible at this threshold stage may have a significant impact on their permissible legal structure. If carbon tariffs are permitted under the current rules relating to border tax adjustments, the exact content and structure of the tariff are obviously still subject to all the substantive provisions of the GATT provisions. However, if the carbon tariffs are not permitted under the border tax adjustment regime and are only justifiable under Article XX(g), then the content and structure of the tariff are not only subject to the other substantive provisions of the GATT, but the overall tariff is also subject to the additional conditions outlined in the chapeau of Article XX. As will be examined below, the latter route to legality places greater constraints on the permissible structure of carbon tariffs than does the former.

## **B. Structuring a carbon tariff that complies with the substantive provisions of the GATT**

Having argued above that carbon tariffs are not categorically prohibited under existing WTO law, this section now considers what constraints the GATT places on the permissible structure of carbon tariffs. To this end, this section considers three major constraints in the GATT on the structure of carbon tariffs. First, this section addresses the limitations created by the National Treatment principle in Article III:2. Second, it addresses the limitations imposed by the MFN principle in Article I. Finally, it examines what additional limitations would be placed on a carbon tariff if the scheme as a whole were subjected to the requirements of the chapeau of Article XX.

### 1. Article III:2 of the GATT

Article III:2 of the GATT places on the contracting parties an obligation of National Treatment with respect to internal taxes and other internal charges. Although referred to in this article as carbon *tariffs*, which suggests that the measures discussed here are import measures, the schemes discussed in this article are all charges which are coupled with charges levied on domestic CO<sub>2</sub> emissions. Thus, Article III is applicable to carbon tariffs whether they are viewed as internal charges or as import measures, either directly through the application of Article III to 'internal taxes and other internal charges' or indirectly through the requirement in Article II:2 that charges levied at the border which are equivalent to internal taxes must be consistent with Article III. There are two separate obligations created by the two sentences of Article III:2 which would apply to carbon tariffs. The first sentence of Article III:2 prohibits the imposition of taxes on imported products which are 'in excess of' the taxes applied to like domestic products.<sup>104</sup> The second sentence of Article III:2 prohibits dissimilar taxation of domestic and imported products, where those products are 'directly competitive or substitutable' and the dissimilar taxation is 'applied . . . so as to afford protection to domestic production'.<sup>105</sup>

Before examining exactly what constraints these two obligations place on the permissible structure of carbon tariffs, it is necessary to specify exactly how the National Treatment principle in Article III:2 applies to carbon tariffs. As noted at the start of the previous section, a carbon tariff could either be characterized as a charge on (i) the imported good itself, or (ii) the CO<sub>2</sub> emitted in the production of that good. The reason that the previous section devoted significant attention to examining whether the latter characterization of the charge is a type of charge which is amenable to a border tax adjustment is precisely because, if the charge is characterized as the former, it would almost certainly violate either one or both of the obligations set out in the two sentences of Article III:2. By contrast, the limited jurisprudence that exists addressing the relationship of Article III:2 to border tax adjustments suggests that, if carbon taxes are amenable to border tax adjustments, the imposition of similar charges for a particular quantity of CO<sub>2</sub> emissions may not violate Article III:2.

(a) *Carbon tariffs as a charge on the imported product* If a tax on carbon emissions is not a type of charge which is amenable to border tax adjustments, then it seems likely that it would be found to violate the National

<sup>104</sup> The text of Article III:2, first sentence, is as follows: 'The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products.' *GATT* 1947 (n 77) at Article III:2.

<sup>105</sup> *Ibid.*

Treatment principle in the GATT. Under the obligation in the first sentence of Article III:2, imported products cannot be subject to taxes which are 'in excess of' the taxes on like domestic products.<sup>106</sup> Under a literal interpretation of Article III:2 first sentence, the comparison that must be made is between the tax imposed on a domestic product and the tax imposed on the 'like' foreign product.<sup>107</sup> In the case of carbon tariffs, it seems relatively clear that, to use Pauwelyn's example, a carbon tariff would result in a tax on imported 'high-CO<sub>2</sub> steel' which is in excess of domestically-produced 'low-CO<sub>2</sub> steel'.<sup>108</sup> Thus, the question is whether high-CO<sub>2</sub> steel is 'like' low-CO<sub>2</sub> steel.<sup>109</sup>

In *Japan – Alcoholic Beverages*, the Appellate Body outlined four factors that have been considered in GATT and WTO jurisprudence for determining of whether two products are like for the purposes of Article III:2, first sentence: (i) the product's end-uses; (ii) consumers' tastes and habits; (iii) the product's properties, nature and quality; and (iv) similar tariff classification. Pauwelyn argues that all of these factors, except for potentially consumers' tastes and habits, suggest that high-CO<sub>2</sub> and low-CO<sub>2</sub> steel are like products under Article III:2, first sentence.<sup>110</sup>

It could be argued that under the third factor listed above, a product's 'properties, nature and quality' include the degree of CO<sub>2</sub> emitted in the course of production of those products.<sup>111</sup> However, practical considerations

<sup>106</sup> The phrase 'in excess of' in this sentence has been consistently interpreted by the Appellate Body entailing any difference whatsoever in taxation. Thus, even if the tax burden on imported products is only slightly in excess of the tax burden on 'like' domestic products, a violation of the first sentence of Article III:2 will be made out. See, eg Appellate Body Report, *Japan – Taxes on Alcoholic Beverages*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, adopted 1 November 1996 [*Japan – Alcoholic Beverages*].

<sup>107</sup> See Goh (n 3) at 409. See also the response to Goh's argument (n 113).

<sup>108</sup> Pauwelyn (n 12). Pauwelyn refers in his example to 'high-carbon steel' and 'low-carbon steel', but this paper instead labels them 'high-CO<sub>2</sub> steel' and 'low-CO<sub>2</sub> steel' in order to clarify that this paper is not referring to high-carbon steel and low-carbon steel in the sense of different types of steel with different chemical compositions which serve different functions.

<sup>109</sup> *Japan – Alcoholic Beverages* (n 106).

<sup>110</sup> Pauwelyn (n 12).

<sup>111</sup> It is unclear whether process and production methods can be considered in the Article III:2 analysis, as cases dealing with this issue have thus far not touched in Article III:2.

In the second/Dolphin case, the GATT panel held that for the purpose of Article III:4, tuna caught using dolphin-friendly methods was 'like' that caught in ways which resulted in the deaths of dolphins. Using rather strong language to dismiss the relevance of production methods, the panel noted that differences in tuna harvesting practices could not 'have any impact on the inherent character of tuna as a product.' GATT Panel Report, *United States – Restrictions on the Import of Tuna*, DS29/R, 16 June 1994, unadopted, para 5.9.

Some support could arguably be found in the *EC – Asbestos* case for the relevance of production methods in determining the likeness of two products. Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001 [*EC – Asbestos*]. In that case, the Appellate Body found that cement-based products containing chrysotile asbestos fibers were not like cement-based products containing PCH fibers on the basis of the difference in the physical

might lead a WTO panel considering this factor to conclude that high-CO<sub>2</sub> steel is 'like' low-CO<sub>2</sub> steel. Even accepting the notion that differences in the production and process methods used in producing two otherwise like products can in some cases lead to a finding that the products are not in fact like under Article III:2, the fact that CO<sub>2</sub> emissions are a continuous variable complicates the determination of likeness. Indeed, if high-CO<sub>2</sub> and low-CO<sub>2</sub> steel were not considered like products, the WTO panel would be drawn into the messy role of determining what difference in CO<sub>2</sub> emissions is sufficient for two products to not be considered like. Thus, under this understanding of the requirements of the requirements of the first sentence of Article III:2, it seems likely that a carbon tariff would violate that obligation.

(b) *Carbon tariffs as a charge on the CO<sub>2</sub> emitted in the manufacture of the imported product* By contrast, if charges on CO<sub>2</sub> emissions are accepted as being the type of charges which are amenable to being adjusted under WTO principles relating to border tax adjustments, the argument could be made that the fact that imported high-CO<sub>2</sub> steel is subject to a higher tax than domestically-produced low-CO<sub>2</sub> steel would not by itself violate the National Treatment principle in Article III:2. While the interaction of Article III:2 and the rules on border tax adjustments is not entirely clear, it appears that Article III:2 may simply require that border tax adjustments on prior-stage taxes impose a tax burden on the foreign producers equal to what the tax burden on the product would have been had the product been produced identically domestically rather than requiring an equal tax burden on the final product. The *Superfund* case illustrates this point.

As noted above, in the *Superfund* case a GATT panel accepted that a tax on imported products which was based on the quantities of certain chemicals used in the production of the imported product was eligible for border tax adjustments. It then concluded that the tax in question did not violate Article III:2 of the GATT, because 'the tax on certain imported substances was equivalent to the tax borne by like domestic substances as a result of the tax on certain chemicals'.<sup>112</sup> In other words, Article III:2 was not violated because for any particular quantity of chemicals used in the production of a final good, the overall taxes levied with respect to those chemicals would be the same for domestic and foreign producers, even though a higher

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properties of the two products, despite similar end-uses. *EC – Asbestos*, para 114. However, in that case, a finding of likeness was defeated not by differences in production methods *per se*, but rather because of differences in the physical properties of products which were physically incorporated into the final product. This is unlike the case of two products which were produced with different amounts of CO<sub>2</sub> emissions, as in that case, the physical properties of the end product and all incorporated products might be identical. Thus, applicability of *EC – Asbestos* may be limited.

<sup>112</sup> *United States – Superfund* (n 81) at para 5.2.9.

tax burden would be imposed on a foreign producer if the foreign producer used more of a particular chemical than a domestic producer in the production of a particular quantity of the final good. This suggests that what is required by Article III:2 with respect to border tax adjustments is equal taxation with respect to the underlying subject of the tax.<sup>113</sup> If this interpretation of Article III:2 is correct, then a carbon tariff would not violate Article III:2, *provided that* foreign and domestic producers are subject to the same level of tax for a given quantity of CO<sub>2</sub> emissions.

If the above interpretation of the obligation in Article III:2 with respect to border tax adjustments is correct, then the general structure of the *Lieberman-Warner Bill* would likely satisfy this requirement. The *Lieberman-Warner Bill* tries to ensure that equal tax burdens are imposed for domestic and foreign CO<sub>2</sub> emissions by (i) setting the prices of allowances roughly equal,<sup>114</sup> and (ii) adjusting downward the number of allowances which importers are required to purchase to account for the number of allowances distributed for free to domestic producers.<sup>115</sup> Thus, the general structure of the scheme tries to equalize the charge per ton of CO<sub>2</sub> emitted by domestic and foreign producers.

However, even under this interpretation of the requirements of Article III:2, there remain several aspects of the *Lieberman-Warner Bill* that would likely still violate the National Treatment principle. First, under that regime, the number of emission allowances that domestic producers are required to purchase corresponds to their actual CO<sub>2</sub> emissions.<sup>116</sup> By contrast, the number of international reserve allowances which importers are required to purchase is not based on the actual CO<sub>2</sub> emissions which were emitted in the production of the good, but rather on the average CO<sub>2</sub>

<sup>113</sup> Goh disagrees with this analysis, arguing that ‘For the purposes of Article III:2... the relevant basis of comparison is... the level of taxes applied to the “final” goods as opposed to the taxes applied to inputs used in their production. Nor is the basis of comparison the overall “fiscal burden” borne by producers in the importing and exporting country in terms of all taxes that might be borne in their economic activities.’ Goh (n 3) at 409. This argument seems to fly in the face of the GATT panel’s reasoning in the *Superfund* case. In that case, certain imported final goods were subject to a tax which was not levied on domestically produced final goods. There was no violation of Article III:2 because the tax on the imported final good equaled the taxes that would have been levied on intermediate products used in the production of the final good had the production of the goods occurred in the USA. The comparison in that case thus seemed to be a comparison of the overall tax burdens that would be borne by domestic and foreign producers in producing a particular, assuming equality in their uses of the inputs which were subject to the tax.

Pauwelyn, in analyzing the *Superfund* case, reaches a similar conclusion as this paper with respect to the requirements of Article III:2, in that he notes that ‘it would be rather odd for the WTO to intervene in this question of differentiating between types of steel depending on their carbon footprint, once the WTO has earlier accepted that carbon taxes or regulations can be adjusted at the border’ Pauwelyn (n 12) at 28.

<sup>114</sup> Lieberman-Warner, 2008 (n 46) at §1306(a)(4)(B)(ii).

<sup>115</sup> *Ibid.*, at §1306(d)(4).

<sup>116</sup> *Ibid.*, at §202.

emissions of producers of that category of goods.<sup>117</sup> In the *US – Gasoline* case, the WTO Panel held that applying individualized baseline environmental standards to US gasoline producers while not making that option available to importers of foreign gasoline violated Article III:4 of the GATT.<sup>118</sup> Although this decision was decided under Article III:4 of the GATT, the reasoning seems equally applicable to Article III:2. If American firms receive an individual assessment of their emissions, while foreign firms are required to purchase emissions corresponding to the average emissions of producers in their country, then cleaner-than-average polluters from those countries be required to pay more per ton of CO<sub>2</sub> emitted than domestic producers, in violation of Article III:2.

There are two ways in which this aspect of the *Lieberman-Warner Bill* could be brought into compliance with Article III:2 of the GATT. First, it could provide equal treatment to domestic and foreign producers by providing foreign producers with the same individualized assessment of their CO<sub>2</sub> emissions as domestic producers receive. As per the *US – Superfund* case, there could also be a default rate which applies to foreign producers when they refuse to provide sufficient evidence.<sup>119</sup> While approach would be effective in internalizing to importers the cost of their actual CO<sub>2</sub> emissions, it would be administratively difficult to implement. A second approach would be to use Ismer and Neuhoff's proposal of imposing border tax adjustments on the basis that products were produced using the best available technology.<sup>120</sup> While this would be administratively easier, it would only partially internalize the costs of foreign producers' CO<sub>2</sub> emissions, and it would provide no incentive for high CO<sub>2</sub> emitters to reduce their emissions.

The provisions of the *Lieberman-Warner Bill* which allow domestic producers some flexibility in terms of when they provide their emissions allowances may also violate Article III:2, as such flexibility is not provided to foreigners. The leading WTO decision on that point is *Argentina – Bovine Hides*.<sup>121</sup> In that case, a WTO panel found that a provision in Argentine tax legislation which required importers to pre-pay a portion of their sales taxes while domestic producers paid the taxes at the time of the sale violated Article III:2 of the GATT.<sup>122</sup> The panel held that 'Article III:2, first

<sup>117</sup> *Ibid*, at §1306(d)(3).

<sup>118</sup> Panel Report, *United States – Standards for Conventional and Reformulated Gasoline*, WT/DS2/R, adopted 20 May 1996, as modified by Appellate Body Report WT/DS2/AB/R [*US – Gasoline*, Panel]. While the USA did bring an appeal before the Appellate Body, it chose not to appeal this particular conclusion. See *US – Gasoline*, AB (n 97).

<sup>119</sup> *United States – Superfund* (n 81).

<sup>120</sup> Roland Ismer and Karsten Neuhoff, 'Border tax adjustment: a feasible way to support stringent emission trading', 24 *Eur J L Econ* 137.

<sup>121</sup> *Argentina – Bovine Hides* (n 81).

<sup>122</sup> *Ibid*, at para 11.174 and subsequent paragraphs.

sentence, requires a comparison of actual tax burdens rather than merely of nominal tax burdens<sup>123</sup> and that the pre-payment resulted in a higher actual tax burden due to the loss of interest over the period in question.<sup>124</sup> The fact that the *Lieberman-Warner Bill* allows domestic producers to submit their emissions allowances up to ninety days after the end of the calendar year, while foreign producers are required to have sufficient international reserve allowances accompanying their imports, could thus violate Article III:2, first sentence.<sup>125</sup> Thus, while the overall structure of the *Lieberman-Warner Bill* likely satisfies the requirements of Article III:2, certain aspects of the Act would require revision in order to comply with the National Treatment principle.

## 2. Article I of the GATT

Article I:1 of the GATT enshrines the most favoured nation (MFN) principle which specifies that ‘any advantage, favour, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties’.<sup>126</sup> The language of Article I:1 expressly includes in the scope of this obligation ‘all matters referred to in paragraphs 2 and 4 of Article III.’ This means that not only can a country not have internal taxes or charges which discriminate against foreign producers in favour of domestic producers, it similarly cannot have internal taxes or charges which discriminate among foreign producers.<sup>127</sup>

Of particular relevance for the case of carbon tariffs is that Article I:1 has been held to preclude discrimination among countries on the basis of policies adopted by those countries. For example, in *Indonesia – Autos*, the WTO panel explicitly held that advantages ‘cannot be made conditional on any

<sup>123</sup> *Ibid*, at para 11.183.

<sup>124</sup> *Ibid*, at para 11.187–11.188.

<sup>125</sup> Additionally, the ability of domestic producers to borrow emission allowances directly from the Commission while denying this ability to importers might also violate Article III:2, as it provides a benefit to domestic producers which is unavailable to foreign producers. However, this situation is not quite as clear as the other violations of Article III:2 discussed above, as this difference does not necessarily result in a greater tax burden on foreign producers than on domestic producers. Rather, it in essence makes credit available to domestic producers which is unavailable to foreign producers, and this does not necessarily result in a higher tax burden on foreign producers. However, it would result in a higher tax burden on foreign producers if  $(1.1)^*r_{at} < r_{ft}$  where  $r_{at}$  is the return on holding domestic emissions allowances over a period  $t$ , and  $r_{ft}$  is the lowest rate of interest on a loan for a period  $t$  available to a foreign producer in order to purchase international reserve allowances.

<sup>126</sup> *GATT* 1947 (n 77) at Article I:1.

<sup>127</sup> That Article I:1 prohibits discriminatory internal taxes was confirmed by the GATT panel in the *Belgian Family Allowances* case. Report of the Panel, *Belgian Family Allowances*, G/32 – 1S/59, adopted 7 November 1952 [*Belgian Family Allowances*].

criteria[on] that is not related to the imported product itself.<sup>128</sup> While the mere presence of conditions attaching to the grant of some benefit may not violate Article I:1, a condition that discriminates as between different countries will violate the MFN principle.<sup>129</sup> Even measures which are facially neutral between countries of origin may be found to violate Article I:1 if they result in a discriminatory impact as between countries.<sup>130</sup>

There are five principal examples of discrimination among foreign states in the *Lieberman-Warner Bill* which might conflict with the rules discussed above. First, states producing less than 0.5% of global greenhouse gas emissions are exempted from the requirement to purchase international reserve allowances.<sup>131</sup> Second, states that have taken actions comparable to the United States to limit greenhouse gas emissions are also exempted from the requirement to purchase international reserve allowances.<sup>132</sup> Third, even if states have not taken actions which are fully comparable to the USA in limiting their greenhouse gas emissions, the number of allowances which importers from those countries are required to purchase may be reduced on the basis of steps that the country has taken to limit their emissions.<sup>133</sup> All of these actions would violate Article I:1, as they discriminate among producers from different countries based on conditions relating to either the country itself (in the first case) or on actions taken by the country's government (in the second and third cases).

A fourth source of discrimination is the exemption of importers of goods from those countries identified by the UN as least-developed developing countries (LDDCs) from the requirement to purchase allowances.<sup>134</sup> While this would otherwise violate Article I:1, it would likely be allowed under the Enabling Clause, which permits developed countries to offer 'differential and more favourable treatment to developing countries, without according such

<sup>128</sup> Panel Report, *Indonesia – Certain Measures Affecting the Automotive Industry*, WT/DS54/R, WT/DS55/R, WT/DS59/R, WT/DS64/R, adopted 23 July 1998, para 14.143. See also *Belgian Family Allowances*, *ibid.*

<sup>129</sup> Panel Report, *Canada – Certain Measures Affecting the Automotive Industry*, WT/DS139/R, WT/DS142/R adopted 19 June 2000, as modified by Appellate Body Report WT/DS139/AB/R, WT/DS142/AB/R, para 10.22 and 10.23. Although the Panel's decision was appealed, its interpretation of 'unconditionally' was not appealed. Additionally, the Appellate Body upheld the panel's overall with respect to Article I:1. See Appellate Body Report, *Canada – Certain Measures Affecting the Automotive Industry*, WT/DS139/AB/R, WT/DS142/AB/R, adopted 19 June 2000 [*Canada – Autos*, AB].

See also the interpretation provided by Trebilcock and Howse (n 8) at 65 of Appellate Body Report, *United States – Import Measures on Certain Products from the European Communities*, WT/DS165/AB/R, adopted 10 January 2001.

<sup>130</sup> *Canada – Autos*, AB, *ibid.*, at paras 64–86.

<sup>131</sup> *Lieberman-Warner*, 2008 (n 46) at §1306(b)(2)(c).

<sup>132</sup> *Ibid.*, at §1306(b)(2)(a).

<sup>133</sup> *Ibid.*, at §1306(d)(5).

<sup>134</sup> *Ibid.*, at §1306(b)(2)(b).

treatment to other WTO Members'.<sup>135</sup> In the *EC – Tariff Preferences* case, the Appellate Body held that the Enabling Clause does not require developed countries to provide equal preferential treatment to all developing countries, but rather allows them to provide preferential treatment to only certain developing countries, provided that such differential treatment is provided on an objective standard based on the 'development, financial and trade needs' of those countries.<sup>136</sup> In providing additional guidance on what standards might be permissible bases for differential treatment, the Appellate Body indicated that '[b]road-based recognition of a particular need, set out... in multilateral instruments adopted by international organizations, could serve as such a standard'.<sup>137</sup> The exemption of least-developed developing countries from the requirement to purchase allowances in all likelihood meets this standard, as the LDDC is determined by an international organization and identifies the poorest and most vulnerable developing countries. Thus, providing an exemption from the requirement to purchase allowances to LDDCs would likely not violate the GATT.

The final source of potential discrimination in the *Lieberman-Warner Bill* is a slightly more difficult case than the previous four. Section 1306(e)(1)(A) of the 2008 bill allows importers to 'submit, in lieu of an international reserve allowance issued... a foreign allowance or similar compliance instrument distributed by a foreign country pursuant to a cap-and-trade program that constitutes comparable action'.<sup>138</sup> On the one hand, it could be argued that this formally discriminates in favour of producers from countries that have taken 'comparable action,' as it allows producers from those countries to use permits that they were required to have under the laws of those countries.

However, there are two compelling reasons to think that this section would not violate Article I:1 of the GATT. First, this section would only have a beneficial impact on producers from those countries if the cost of acquiring the foreign allowance is below the cost of acquiring a US international reserve allowance. If the cost of acquiring the foreign allowances is greater than or equal to the cost of acquiring the international reserve allowances, then this section would not actually confer any benefit on those producers.<sup>139</sup> Second, and more importantly, if producers from countries without

<sup>135</sup> Decision of 28 November 1979 on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries, L/4903.

<sup>136</sup> Appellate Body Report, *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, WT/DS246/AB/R, adopted 20 April 2004, para 163 [*EC – Tariff Preferences*].

<sup>137</sup> *Ibid.*, at para 163.

<sup>138</sup> *Lieberman-Warner*, 2008 (n 46) at §1306(e)(1)(A).

<sup>139</sup> Indeed, if emission allowances from jurisdiction X can be used to satisfy obligations in jurisdiction Y and vice versa, then one would expect prices of emission allowances to be equal in both jurisdictions, as an inequality of prices would lead to profitable arbitrage opportunities.

comparable programs are permitted by the countries with comparable programs to purchase emissions allowances issued under the latter's program—as is currently the case with the EU ETS allowances<sup>140</sup>—then this scheme would not actually provide any benefit to producers from those countries, at least provided that there is some adjustment made for those permits allocated for free. Thus, it seems that this section would not *necessarily* violate Article I:1, although its compliance with that article ultimately depends on the particular characteristics of the foreign allowances which would be accepted in lieu of the international reserve allowances.

### 3. Article XX of the GATT

Having examined various provisions of the GATT, it seems apparent that the legal analysis under the chapeau of Article XX may ultimately play a significant role in determining the legality of a carbon tariff. As noted above, it is unclear that the current rules on border tax adjustments would allow an internal charge on CO<sub>2</sub> emissions to also be applied to imports. In this case, the carbon tariff as a whole would need to be subjected to the scrutiny of the chapeau of Article XX. However, even if the basic structure of the scheme is permitted by the rules on border tax adjustments, particular aspects of a carbon tariff could, as examined above, potentially still violate Article III:2 or I:1 and thus require justification under Article XX. This section will examine the principles in the chapeau of Article XX to determine what type of carbon tariff might ultimately be justifiable.

As noted above, the chapeau of Article XX requires that the measure that is sought to be justified is not an 'arbitrary or unjustifiable discrimination between countries where the same conditions prevail' or a 'disguised restriction on international trade'.<sup>141</sup> The leading Appellate Body decision on the interpretation of the requirements of the chapeau in Article XX(g) cases is the decision in *US – Shrimp*. The Appellate Body parsed the first requirement above as requirement three elements: there must be discrimination, it must be arbitrary or unjustifiable, and it must occur between countries where the same conditions prevail.<sup>142</sup> It also noted that the chapeau of Article XX protects not just against facially discriminatory measures, but also against facially equal but substantively discriminatory conditions.<sup>143</sup>

In interpreting these requirements, the Appellate Body outlined a number of conditions that must be met for a measure to be justified under the chapeau of Article XX. With respect to the issue of 'unjustifiable discrimination', the Appellate Body noted that a trade-related measure which forces

<sup>140</sup> Directive 2003/87/EC (n 17) at Article 12.

<sup>141</sup> *US – Shrimp* (n 97). See also Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R, adopted 17 December 2007, para 215 [*Brazil – Retreaded Tyres*].

<sup>142</sup> *US – Shrimp*, *ibid.*

<sup>143</sup> *Ibid.*, at para 160.

another country to adopt ‘essentially the same’ environmental program would not satisfy the requirements of the chapeau. A country can justifiably impose trade-related measures against foreign countries which do not adopt programs of comparable effectiveness in protecting the natural resource in question, but it cannot require the foreign countries to adopt the same program.<sup>144</sup> The Appellate Body also noted that the failure of a state to engage other WTO members in good faith negotiations for the purpose of creating an agreement for the protection of the resource in question will tend towards a finding of unjustifiable discrimination.<sup>145</sup> It is not necessary that an international agreement to be concluded, but merely that the country has attempted to reach such an agreement.<sup>146</sup> Finally, the Appellate Body held that the chapeau of Article XX requires states seeking to justify trade restrictions on environmental grounds to provide some degree of transparency and procedural fairness with respect to the application of the restrictions to those states affected by the measure.<sup>147</sup>

The 2008 version of the *Lieberman-Warner Bill* seems in most respects to satisfy the requirements imposed by the chapeau of Article XX. The bill does not mandate that other states adopt a specific type of regime for the reduction of greenhouse gases in order for importers of products from those states to be exempt from the requirements to purchase international reserve allowances. Rather, it allows states to receive an exemption from that requirement if they adopt a program comparable in effectiveness.<sup>148</sup> Moreover, even if a country has not taken comparable action, the bill allows for the reduction of the number of international reserve allowances that an importer must purchase based on the measures that the country has actually taken.<sup>149</sup> Thus, some of the measures that earlier were noted to be likely violations of Article I:1 of the GATT actually contribute to the US carbon tariff regime’s flexibility, thereby tending to suggest that the measure does not constitute unjustifiable discrimination.

Additionally, the *Lieberman-Warner Bill* contains provisions which exhort the executive to enter into bilateral or multilateral negotiations with other states for the purposes of encouraging other states to take comparable actions to those taken by the USA and ultimately concluding a binding

<sup>144</sup> Ibid, at paras 163–4. See also of the discussion on this point this in Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia*, WT/DS58/AB/RW, adopted 21 November 2001 [*US – Shrimp 21.5*]. More generally, the discrimination must rationally relate to the objective being pursued. Where the reason for the discrimination does not relate to the objective in pursuit of which the measure was provisionally justified, it will be unjustifiable. See *Brazil – Retreaded Tyres* (n 141) at para 227.

<sup>145</sup> *US – Shrimp*, ibid, at para 166.

<sup>146</sup> *US – Shrimp 21.5* (n 144).

<sup>147</sup> *US – Shrimp* (n 97) at para 180–3.

<sup>148</sup> *Lieberman-Warner*, 2008 (n 46) at §1306(b)(2).

<sup>149</sup> Ibid, at §1306(d)(2).

international agreement for the reduction of greenhouse gas emissions.<sup>150</sup> While it is unclear whether the executive would actually engage in such negotiations prior to implementing a carbon tariff, the inclusion of these provisions in the legislation at least provisionally suggests that the measure as a whole does not constitute unjustifiable discrimination.

However, some of the particular provisions in the *Lieberman-Warner Bill* would likely not be justifiable under the chapeau of Article XX. There are two aspects of the *Act* which are almost certainly problematic under the chapeau. First, the fact that domestic firms purchase allowances commensurate with their actual emissions while importers must purchase allowances with average emissions by producers of that category of goods from that country likely cannot be justified under Article XX. The justification of such a measure under Article XX(g) was explicitly rejected by the Appellate Body in *US – Gasoline*. In that case, the USA argued that it would be administratively difficult to provide individualized baseline pollution levels for all gasoline imports and that a statutory baseline applicable to all imports should thus be permissible under Article XX. Both the Panel<sup>151</sup> and the Appellate Body<sup>152</sup> rejected that argument. The Appellate Body did not hold that administrative difficulties could *never* justify individualized treatment for domestic producers and more general treatment for foreign producers. However, it did suggest that in order for administrative expediency to justify such a measure the USA had to, at a minimum, (i) attempt to mitigate the administrative problems through cooperation with foreign governments, and (ii) take into account the costs imposed on foreign producers as a result of the more general treatment.<sup>153</sup> This suggests that it would be difficult for the USA to justify this provision, at least in the absence of evidence that the administrative hurdles of obtaining appropriate information from foreign firms and governments are overwhelming. This argument would be even more difficult to make successfully in the particular statutory context of the *Lieberman-Warner Bill*, as individual assessments for importers are expressly contemplated by the bill in a limited class of cases,<sup>154</sup> thereby indicating that such individual assessments are not categorically impossible or impractical.

<sup>150</sup> *Ibid*, at §1303.

<sup>151</sup> *US – Gasoline*, Panel (n 118) at para 6.26.

<sup>152</sup> *US – Gasoline*, AB (n 97) at 26–8.

<sup>153</sup> *Ibid*, at 28–9.

<sup>154</sup> The Act specifies general guidelines for the establishment of regulations for calculating the number of international reserve allowances required where covered goods were manufactured or process in multiple countries. *Lieberman-Warner*, 2008 (n 46) at §1306(d)(8)(A) and (B). However, an importer is permitted to use an alternative method for calculating the number of allowances required if they can ‘demonstrate[] in an administrative hearing by a preponderance of the evidence that the alternate method will establish an international reserve allowance requirement that is more representative’ than the default provision. *Ibid*, at §1306(d)(8)(C).

Second, certain aspects of the scheme proposed by the *Lieberman-Warner Bill* could potentially violate the procedural fairness requirements imposed by the chapeau of Article XX. While the *Lieberman-Warner Bill* requires the establishment of regulations governing administrative hearings for certain determinations,<sup>155</sup> there is no direction in the bill that provides countries with the right to lead evidence or make arguments as to (i) whether they have taken comparable action or (ii) the economic adjustment ratio that should be applied to imports of goods from that country. Of course, the bill does not explicitly preclude such proceedings, and the ability for the Commission to hear evidence from foreign countries on those points might either be established by regulation or might simply become part of the standard administrative practice of the Commission. However, if procedures are not ultimately created which allow foreign countries to participate in some manner in determinations which affect them, the measure as a whole might be found to constitute arbitrary discrimination under the chapeau of Article XX.

A more difficult issue which has been raised by Pauwelyn is whether the USA would be required under the chapeau of Article XX to take into account the special circumstances of developing countries generally and provide some special treatment for developing countries which are not among the LDDCs.<sup>156</sup> While there are no GATT or WTO decisions which explicitly require that developed countries subject developing countries to lessened obligations with respect to environmental protection under Article XX, there are strong reasons to think that a WTO panel considering the proposed US carbon tariff might find the measure to be inconsistent with the chapeau of Article XX without some special treatment.

In the *US – Shrimp* decision, the Appellate Body held that countries, in seeking to justify environmental measures under the chapeau of Article XX, were required to ‘tak[e] into consideration [the] different conditions which may occur’ in other states.<sup>157</sup> While this statement by the Appellate Body was made in the context of rejecting a US program which required foreign countries to adopt virtually identical regulatory programs to the one in the USA, the need to take into account ‘different conditions’ might be interpreted in the context of carbon tariffs to require the USA to take into account the different economic conditions and international legal obligations of developing countries. Indeed, in this regard developing countries have a relatively compelling normative claim, as they can justifiably argue that, because the vast majority of atmospheric CO<sub>2</sub> was emitted by now-developed countries in the course of their industrialization, developing countries should bear a lesser burden in now solving the problem of global warming.

<sup>155</sup> *Ibid.*, at §1306(d)(8).

<sup>156</sup> Pauwelyn (n 12) at 39.

<sup>157</sup> *US – Shrimp* (n 97) at 164.

More importantly, this normative position is also supported by international law, as international conventions and other legal documents relating to the environment have generally recognized that developing countries should bear a lesser burden than developed countries in reducing greenhouse gas emissions. For example, the obligation in the Kyoto Protocol for states to reducing their greenhouse gas emissions 5% below 1990 levels applied only to developed countries and not to developing countries.<sup>158</sup> Additionally, in paragraph 14 of Article 3 of the Kyoto Protocol, developed countries were obligated to 'strive to implement [their required reductions in greenhouse gases] in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties.'<sup>159</sup> Articles 3.1 and 3.2 of the United Nations Framework Convention on Climate Change similarly suggest that developing countries should be given differential treatment,<sup>160</sup> as does Principle 11 of the Rio Declaration on Environment and Development.<sup>161</sup> Even the 1994 WTO Ministerial Decision on Trade and Environment implicitly recognized the special situation of developing countries with respect to environmental protection.<sup>162</sup> Given that the Appellate Body has previously considered other international treaties in outlining the

<sup>158</sup> Kyoto Protocol to the United Nations Framework Convention on Climate Change, Article 3, para 1 [Kyoto].

<sup>159</sup> *Ibid.*, at Article 3, para 14.

<sup>160</sup> United Nations Framework Convention on Climate Change, 9 May 1992, 1771 UNTS 107. The full text of those provisions is as follows: '1. The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.'

'2. The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.'

<sup>161</sup> This provision states as follows: 'Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries.' Rio Declaration on Environment and Development, A/CONF.151/26 (Vol. I) (1992). The Rio Declaration may carry particular weight in WTO law, as it was noted in the Ministerial Decision on Trade and Environment and was cited by the Appellate Body in the *US – Shrimp* case. See *US – Shrimp* (n 97) at para 168.

<sup>162</sup> World Trade Organization, Ministerial Decision on Trade and Environment, 15 April 1994. That Ministerial Decision decide that included in the terms of reference of a Committee on Trade and Environment was an obligation on the Committee to make recommendations regarding 'the need for rules to enhance positive interaction between trade and environmental measures, for the promotion of sustainable development, with special consideration to the needs of developing countries, in particular those of the least developed among them.'

See also World Trade Organization, Ministerial Declaration of 14 November 2001, WT/MIN(01)/DEC/1 [Doha Declaration]. In Article 32 of the Doha Declaration, the WTO directed the Committee on Trade and Environment 'to give particular attention to... the effect of environmental measures on market access, especially in relation to developing countries, in particular the least-developed among them, and those situations in which

legal contours of Article XX,<sup>163</sup> non-LDDCs could plausibly argue that the lack of adjustment for their economic situations represents a failure to consider the internationally recognized different conditions of developing countries and that this represents a breach of the chapeau of Article XX.

The structure of the 2008 version of the *Lieberman-Warner Bill* is itself susceptible to this criticism. While the 2007 bill included a country's level of economic development as a relevant consideration in determining whether a country had taken 'comparable action',<sup>164</sup> this provision was removed in the 2008 bill. In the latter version, a country's level of economic development is entirely irrelevant to either the definition of 'comparable action' or the number of allowances which importers of products from that country are required to purchase.<sup>165</sup> Moreover, in a somewhat bizarre manner, the 2008 bill might actually expose itself to further criticism on this point because of its blanket exclusion of producers from LDDCs from the requirement to purchase allowances. It could be argued that while the categorical exclusion of LDDCs from the scheme represents a recognition within the legislation itself of the fact that developing countries are subject to different responsibilities with respect to environmental protection, the failure to provide any adjustment of the obligation of non-LDDC developing countries represents a failure to take into account the differentiated needs and responsibilities of different developing countries.

Additionally, it could be argued the failure of the *Lieberman-Warner Bill* to provide differential treatment to non-LDDC developing countries constitutes a 'disguised restriction on international trade'. The increased carbon intensity of goods in countries such as China and India means that goods from those countries would, on average, be subject to much higher charges under the *Lieberman-Warner Bill* than would comparable US goods.<sup>166</sup> Of course, this fact by itself does not by itself mean that the program constitutes a disguised restriction on international trade. However, the failure of the scheme to make any provisions whatsoever for non-LDDC developing countries, when coupled with the complete exclusion of smaller countries from the scheme under the *de minimis* exception<sup>167</sup> as well as the lobbying efforts of organized labour in favour of toughening the international reserve allowances system,<sup>168</sup> would likely tend towards a finding that the program as

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the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development.'

<sup>163</sup> See, eg *US – Shrimp* (n 97) at para 129–32.

<sup>164</sup> *Lieberman-Warner, 2007* (n 45) at §6006 (d)(2)(B)(ii).

<sup>165</sup> *Lieberman-Warner, 2008* (n 46) at §1306.

<sup>166</sup> Trevor Houser and others, *Leveling the Carbon Playing Field* (Washington, DC: Peterson Institute for International Economics, 2008) 47–51.

<sup>167</sup> *Lieberman-Warner, 2008* (n 46) at §1306(b)(2)(A)(iii).

<sup>168</sup> In his testimony before the Environment and Public Works Committee, Robert Baugh, an AFL-CIO representative urged the international aspects of the *Lieberman-Warner Bill* to take

a whole is a ‘disguised restriction on international trade.’ Thus, while a carbon tariff broadly along the lines of the *Lieberman-Warner Bill* would probably comply with WTO law, there are several elements of the current incarnation of the *Bill* that would likely violate the provisions of GATT, potentially including, most importantly, the failure of the 2008 bill to provide special treatment for non-LDDC developing countries.

## V. ASSESSING THE POLITICALLY VIABLE AND WTO-COMPLIANT POLICY OPTIONS

In the previous section, it was concluded that WTO law as it currently stands would permit countries to impose carbon tariffs, subject to a number of constraints discussed above. However, the previous section only considered legal constraints on the form of carbon tariffs. In addition to those *legal* constraints, domestic political pressures within states can place additional *political* constraints on the acceptable form of carbon tariffs. This section integrates analysis of both the legal and American domestic political constraints to explore the policy space available to the USA and other developed countries in crafting an ETS.

### A. The principal policy constraints

While there are always myriad specific political constraints influencing any policy decision, there is one particularly substantial political constraint which may significantly restrict the policy options open to the USA in crafting an ETS. This constraint is the requirement that any ETS implemented by the USA does not disadvantage American producers vis-à-vis producers from developing countries. As noted above, not reducing the relative competitiveness of American firms is a major political constraint on American policy space. Concerns about losing American jobs to countries like India and China already play a major role in American political rhetoric.<sup>169</sup> It was these concerns which led the USA to reject the Kyoto protocol, and they have continued to dominate the popular rhetoric of American politicians when speaking about climate change.<sup>170</sup>

In effect, this constraint likely means that the USA will not be able to implement any policy which imposes costs on domestic emitters of CO<sub>2</sub>

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effect earlier than 2020. See Testimony of Robert C Baugh, Executive Director AFL-CIO Industrial Union Council and Chair AFL-CIO Energy Task Force, Before the Environment and Public Works Committee of the US Senate, 13 November 2007, <[http://www.aflcio.org/issues/jobseconomy/manufacturing/upload/robert\\_baugh\\_energy\\_110307.pdf](http://www.aflcio.org/issues/jobseconomy/manufacturing/upload/robert_baugh_energy_110307.pdf)> accessed 29 July 2009.

<sup>169</sup> Indeed, popular concerns about the loss of jobs due to free trade negotiations led both leading contenders for the Democratic Party’s nomination for the Presidency to suggest renegotiating NAFTA at a debate in Cleveland on 26 February 2008.

<sup>170</sup> See the discussion and materials (n 12) and (n 13).

which are sufficiently greater than the costs imposed on foreign producers that the domestic producers are deemed to be placed at an unfair disadvantage vis-à-vis foreign producers.<sup>171</sup> In more concrete terms, this political constraint precludes the creation of a domestic ETS which imposes costs on domestic producers but which does not include a carbon tariff that places sufficient charges on importers to negate the perceived competitiveness disadvantage experienced by domestic producers as a result of the domestic scheme. This political constraint, however, might clash with the legal constraint imposed by Article XX of the GATT if, as suggested above, the chapeau of Article XX requires developed countries to accord special treatment to non-LDDC developing countries with respect to the reduction of greenhouse gas emissions. In other words, the legal constraint may require differential treatment, but the political constraint may require identical treatment. These two constraints have the potential to be mutually exclusive, in the sense that all politically acceptable policy options would violate of the constraints imposed by Article XX. If this is the case, the policy options open to the American government would obviously be drastically limited. This section now proceeds to consider those policy options which remain available.

As a word of caution, this section should not be taken as positing that there is *necessarily* an irreconcilable conflict between the political and legal constraints that so drastically limits the available policy options. On the legal side, it may be the case that the constraint being discussed here does not actually exist, in that the chapeau of Article XX may not actually require the USA to impose lower carbon tariffs on non-LDDC developing countries. Similarly, on the political side, it may be that while it is not politically feasible to completely exempt non-LDDC developing countries from a carbon tariff, it might nonetheless be politically feasible to provide some measure of special treatment to such countries which is sufficient to satisfy the requirements of Article XX.

However, it is still worth considering the policy options open to states *assuming* that the constraints pose mutually exclusive requirements. There are two reasons for this. First, and more obviously, the constraints may in fact be binding. Second, even if the constraints are not in fact binding, American policy-makers may act as though they are, given their inability to perfectly predict *ex ante* the exact legal or political constraints which are placed on them. Because the contours of the legal and political constraints can only be precisely determined *ex post* at potentially high cost, risk-averse politicians may simply decline to take the gamble and restrict the policies they enact to those which satisfy both constraints.

<sup>171</sup> The existence of this political constraint is consistent with the absence of any special treatment for non-LDDC developing countries in the 2008 version of the *Lieberman-Warner Bill*.

## B. The constrained policy space

Having outlined the constraints, this section will now briefly consider what types of ETS remain viable policy options despite these two constraints. While the political constraint is an unavoidable check on all potential policies, the legal constraint, because it is based on Article XX, only becomes a binding constraint when one of the other provisions of the GATT is violated. This means that, other than mere inaction, there are two classes of policy options which would not engage the legal constraint posed by Article XX. First, ETS which do not include trade-related measures will not be subject to this constraint. Second, ETS which involve trade-related measures that do not breach any other provision of the GATT would not be subject to the constraint, as Article XX would not be engaged. Each of these options will be examined in turn.

### 1. *A feasible ETS without a carbon tariff*

One potential policy option is for the USA to implement an emission trading scheme which does not expose American firms to any significant competitiveness disadvantage and which therefore does not require the imposition of carbon tariffs to correct for this competitiveness disadvantage. This type of policy option is currently being considered by the European Commission. As noted above, one policy response being considered by the EC to address competitiveness and CO<sub>2</sub> leakage concerns is to allocate without cost 100% of firms' required emissions allowances to those firms that are most exposed to possible anti-competitive effects.<sup>172</sup> This policy recognizes that not all industries—for example, electricity generation—are in or could feasibly be in direct competition with foreign producers. Thus, such a policy in essence limits the costs of the ETS to those particular industries.

While this policy would satisfy both the political and legal constraints discussed above, it has other significant limitations. First, because the scope of ETS is drastically limited under this policy, the corresponding potential for reducing greenhouse gas emissions is similarly limited. Second, while such a policy imposes no direct costs on those firms that are in competitive relationships with foreign producers, it may impose indirect costs on those firms by raising the cost of those firms' inputs, such as electricity, which are not exempted from the scheme. Thus, while such a policy reduces the competitive disadvantage imposed on those domestic firms, it does not eliminate it entirely, and this reduction is only secured at the expense of significantly weakening the potential for reduction of greenhouse gas emissions.

<sup>172</sup> Proposal for a Directive, 2008 (n 35) at 8.

## 2. *A feasible ETS with a carbon tariff*

A second set of feasible policies would be ones which include a broad-based domestic ETS, like the one proposed in the *Lieberman-Warner Bill*, coupled with some type of carbon tariff which does not require justification under Article XX of the GATT. Whether there exist any such carbon tariffs depends, as discussed above in the section titled 'A Threshold Issue: Carbon Tariffs and Border Tax Adjustments under the GATT', on whether a charge on CO<sub>2</sub> emissions is the type of charge which is amenable to a border tax adjustment. If the answer to this question is no, then any type of carbon tariff would require justification under Article XX of the GATT. There would thus be no carbon tariff which satisfies the two constraints. However, if the answer to this question is yes, then there may be particular types of carbon tariffs which do not require justification under Article XX and which would thus be feasible despite the political and legal constraints.

As noted above, beyond the threshold question relating to border tax adjustments, the two principal provisions of the GATT of which carbon tariffs could infringe are Article III:2 and Article 1. While Article III:2 places certain constraints on the structure of carbon tariffs, these constraints are by no means insurmountable. If the emissions charges are found to be eligible for border tax adjustment, then, as mentioned above, Article III:2 can be satisfied by subjecting imports to either (i) individualized assessments based on the actual amount of CO<sub>2</sub> emitted in the production of the good and imposing a charge commensurate with those emissions or (ii) a charge commensurate with the amount of emissions that would have been emitted producing the good using the best available technology. While both of these options would satisfy the requirements imposed by Article III:2, there are obviously different policy considerations surrounding the two policy options. The former option more effectively deals with competitiveness and CO<sub>2</sub> leakage issues; it also more effectively reduces greenhouse gas emissions by giving foreign producers a direct financial incentive to lower their own CO<sub>2</sub> emissions. However, the latter option is more administratively feasible.

The more difficult problem to resolve is that of designing a carbon tariff that does not violate Article I:1 of the GATT. Specifically, a carbon tariff which lowers the charge applicable to products from a particular country because of either steps taken by that country to lower its greenhouse gas emissions or charges already paid domestically by that producer, while easily justifiable and potentially even required under Article XX(g), would violate Article I:1. However, a structure which does not account in any way for steps already taken in the producing country is obviously undesirable, as it could result in a product being subjected to double taxation on its greenhouse gas emissions, both in its home country and upon importation into the importing country.

There are two potential solutions to this problem, each of which presents certain problems. First, a carbon tariff could provide no preferential treatment to such products and instead expect the producing country to overcome the double taxation problem by refunding any levies imposed domestically on greenhouse gas emissions upon export of that product. This would in essence subject both imports *and* exports to border tax adjustment with respect to charges on greenhouse gas emissions. However, the legality of this option under the WTO law of border tax adjustments is not perfectly clear. Even if carbon taxes are amenable to border tax adjustment on imports, they may not be eligible for border tax adjustment on exports, as there is not clearly a perfect symmetry of rules for border tax adjustments with respect to both imports and exports.<sup>173</sup> Additionally, even if this option is legal under WTO rules, the need for states to create programs for the remission of charges paid on greenhouse gas emissions would create additional administrative costs in what would already be a complex and expensive administrative framework.<sup>174</sup>

A second solution would be for those states that have or are seeking to create ETSs to make their schemes completely interoperable by either giving complete mutual recognition to emissions allowances from each other's jurisdictions or by creating a common ETS. For the reasons discussed above, such a program would likely not be found to violate Article I:1, but it would nonetheless ensure that states were not subject to double taxation on their greenhouse gas emissions. However, this option might be politically difficult to structure, as it would necessitate a much greater degree of cooperation and coordination with respect to emission trading schemes than countries have thus far been willing to undertake.

Additionally, both of these options are somewhat problematic from a policy standpoint, because they both rely on the producing country using some type of levy as its policy instrument to lower greenhouse gas emissions. Neither policy is amenable to a more top-down regulatory approach to lowering greenhouse gas emissions. This constrains countries' policy autonomy

<sup>173</sup> The rules relating the border tax adjustments on exports are governed by the SCM Agreement (n 91). In contrast, there is no similarly comprehensive framework for governing border tax adjustments on imports, other than the rules in Articles II and III of the GATT, 1947 (n 77) and the Working Party Report (n 78). While there ought logically to be a symmetry between the rules, there is nothing in WTO treaties or jurisprudence which has confirmed this. Consequently, most academic discussions of border tax adjustments in the context of greenhouse gas reduction have discussed the issues of border tax adjustments for imports and exports separately. See, eg Javier De Cendra, 'Can Emissions Trading Schemes be Coupled with Border Tax Adjustments? An Analysis vis-à-vis WTO Law' (2006) 15 *RECIEL* 131, at 139–45; Biermann and Brohm (n 3) at 251–4.

<sup>174</sup> Such administrative costs could be minimized through multilateral harmonization of the rules governing emissions allowances and information-sharing between jurisdictions. However, it is unclear whether jurisdictions such as the USA and the EU would be able to agree on a common framework to allow such harmonization to occur.

much more than does the *Lieberman-Warner Bill*, which merely requires countries to take measures of comparable effectiveness and leaves it up to those countries themselves to decide how to create a comparably effective program.<sup>175</sup> Thus, while there are potentially feasible policy options despite the legal and political constraints discussed above, these policy options are by no means perfect, and they would likely require multilateral coordination in order to be effective.

## VI. CONCLUSION

This article has provided an assessment of the WTO-legality of carbon tariffs, and it has concluded that a carbon tariff modeled broadly on the basic structure of the carbon tariff in the *Lieberman-Warner Bill* would likely comply with the constraints imposed by the GATT. While it is unclear whether border tax adjustments on CO<sub>2</sub> emissions are permitted under the current rules governing border tax adjustments, even if they are not permitted by those rules, they could likely be justified under Article XX(g) of the GATT. Additionally, while Articles I:1 and III:2 of the GATT impose certain constraints on the permissible structure of carbon tariffs, those constraints are not overly limiting, and Article XX(g) can again potentially play a role in upholding certain violations of these provisions.

However, this article has argued that there are also domestic political constraints in developed countries which shape the character that carbon tariffs are likely to take. Indeed, in light of the discussion above, this article suggests that any meaningful discourse on carbon tariffs must take into account not simply the constraints imposed by WTO law, but rather it must also consider the interaction of both legal and political constraints. Both political and legal structures limit the feasible varieties of carbon tariffs, and future research should thus focus on either mechanisms for relaxing those constraints or on proposing and evaluating carbon tariffs that satisfy all constraints that currently exist and not merely the legal constraints.

This article has taken the latter approach and has briefly examined varieties of carbon tariffs that might comply with both the political and legal constraints on domestic action in this respect. Assuming that the political and legal constraints examined above relating to non-LDDC developing countries are indeed binding, there will be no feasible carbon tariff if carbon tariffs violate the rules of border tax adjustments and need to be justified under Article XX(g). However, if the rules on border tax adjustments do permit the adjustment of taxes on CO<sub>2</sub> emissions, then the possibility exists of designing a carbon tariff that satisfies both the legal and political constraints which are assumed to be binding. A domestic carbon tariff could potentially comply with the MFN principle in Article I:1 of the

<sup>175</sup> Lieberman-Warner, 2008 (n 46) at §1301(4).

GATT by either (i) including border tax adjustments on CO<sub>2</sub> emissions on exports as well as imports, or (ii) being part of a broader multi-national ETS with full exchangeability between emissions allowances in different jurisdictions. Both of these solutions have their pitfalls. However, a full examination of these options is beyond the scope of this article, and an examination of such potential solutions is left for future research. This article has simply emphasized that the discourse on carbon tariffs must move beyond the question of their legality or illegality *per se* under WTO law and must instead take a more nuanced view on the precise structure for such tariffs to be feasible.

It is important to note what claims this article has not advanced. To echo the sentiments of Bhagwati and Mavroidis, this article has not argued that any particular carbon tariff, even if potentially feasible, *should* be implemented.<sup>176</sup> Rather, it has simply identified and examined certain constraints which impact the legal and political feasibility of carbon tariffs. Even if a particular tariff were both politically acceptable domestically and permitted under WTO law, it would still almost inevitably significantly depress the volume of international trade and engender significant resentment in those countries most adversely impacted by it, not to mention create the possibility of significant litigation or the potential for other countries taking retaliatory measures. In any evaluation of whether a particular carbon tariff should be employed, these considerations would obviously have to be balanced against the benefits that stem from such tariffs. This, however, is an entirely separate consideration which is logically posterior to the question of whether a particular carbon tariff is feasible, which has been the subject of this article.

Nevertheless, as an interim conclusion on the latter point, this article suggests that countries should exercise significant caution in imposing any carbon tariff. Given the legal uncertainty surrounding the permitted structure of carbon tariffs—and, as evidenced by the discussion of the *Lieberman-Warner Bill*, the myriad ways that such a tariff could violate WTO law—the possibility that any particular carbon tariff, if challenged, could be found to violate WTO law is a strong reason that countries should exercise caution in implementing carbon tariffs. If such a tariff were implemented and ultimately found to violate WTO law, the possibility exists that the state imposing the carbon tariff might, due to pressure from domestic political interests that would have coalesced in support of the tariff, refuse to modify the tariff in order to comply with the WTO ruling. This would not only foster resentment, but it could also significantly halt the progress of trade liberalization and place a significant strain on the legitimacy of the WTO system.

<sup>176</sup> Jagdish Bhagwati and Petros C Mavroidis, 'Is Actions Against US Exports for Failure to Sign Kyoto Protocol WTO-Legal?' (2007) 6 *World Trade Rev* 299.

Thus, despite the undeniable need for states to take action to combat global warming, reaching a multilateral solution to this problem should be a first-best solution. This is not to say that unilateral measures may not ultimately be required by the need to combat anthropogenic climate change and the failure or sluggishness of a multilateral solution. However, it means that, given their potential ramifications, the unilateral imposition of carbon tariffs should not be undertaken without significantly more consideration of both their feasibility and their desirability.