

***491 DESIGN OF AN INTERNATIONAL TRADE LAW COMPLIANT CARBON BORDER TAX ADJUSTMENT**

Many scholars have analyzed whether a border tax adjustment (BTA) on carbon would comply with the General Agreement on Tariffs and Trade (GATT). None, however, have presented the details of such a BTA. This paper consolidates the treaty arguments upon the design features of a border tax adjustment which is compliant with the General Agreement on Tariffs and Trade. I present the details of such a BTA and compare and contrast it with alternative BTA designs. Ultimately, a carbon BTA does not negate the need for international diplomacy and the presentation of the carbon BTA identifies some of what that diplomacy might involve.

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***493I. Introduction**

Many legal scholars have concluded that a carbon border tax adjustment (BTA) would comply with the General Agreement on Trade and Tariffs (GATT).¹ Many of those scholars specify the general features of a carbon BTA and some have critiqued existing or proposed policy. None, however, have offered a concrete proposal for a carbon BTA. Joost Pauwelyn, for instance, concludes his analysis of a border tax adjustment by stating that “[c]arbon leakage measures and border tax adjustments can therefore be WTO consistent. The devil will be in the details.”²

This paper attempts the numerous details by consolidating the treaty arguments upon two proposals for a carbon border tax adjustment, including the language from a submitted carbon tax bill. Doing so allows us to identify two general types of carbon BTA and to observe particular design features which the GATT requires. Also, this analysis takes account of the Appellate Body’s new jurisprudence on the Technical Barriers to Trade. Ultimately, a carbon BTA does not negate the need for further diplomacy but, if constructed correctly, should facilitate climate diplomacy.

Since the design of the carbon BTA depends upon the design of the correlative domestic mitigation policy, I sketch that policy in section II. In Sections III through IX, I discuss why the proposed carbon BTA is GATT compliant. In Section X, I contrast the proposed carbon BTA with that in H.R. 2202, the Tax Pollution Not Profits Act introduced by Rep. Delaney in the spring of 2015.

II. Domestic Mitigation Policy: Pigouvian Taxation

A Pigouvian tax aims to correct a market failure by requiring market participants to pay the social cost which are not reflected in the market price of the ***494** exchanged goods.³ While conceptually simple, a carbon tax will interact with preexisting policies and so some of the features of a Pigouvian tax upon carbon dioxide emissions are sketched in this section. This is not so much an argument for a Pigouvian tax vis-à-vis other policies meant to price carbon, but rather a description sufficient to evaluate the treaty compliance of a carbon BTA and to identify features which must be left for further climate diplomacy. However, as shall be shown, it is easier to construct a GATT compliant BTA when the correlative domestic price on carbon is stable and identifiable in law. A carbon tax, but not a cap-and-trade system, provides such a price, and this is one reason to favor it as compared to cap-and-trade.

The posited Pigouvian carbon tax shall be upon the prospective carbon dioxide emissions of fossil fuels, which shall be labeled the “carbon content” of a fossil fuel. The carbon tax shall be assessed at that point in a fossil fuel’s production and processing at which its chemical composition and use are known as exactly as possible.⁴ By doing so, one simplifies the administration of a carbon tax by eliminating the need to construct a system for rebating non-combustive uses of fossil fuels, such as feedstock for plastics or fertilizer.

Imported fossil fuels are to be subject to the same Pigouvian tax, although as a category they are to be distinguished from other carbon-intensive products subject to the carbon BTA. Processed and non-processed fossil fuels shall need to be distinguished and a procedure developed for identifying the pre-importation upstream emissions resulting from a fossil fuel’s processing. In particular, the emissions resulting from refining petroleum shall be subject to the carbon BTA. This provides parity with the domestic carbon tax, which covers the domestic upstream emissions of fossil fuel production without a need to specifically identify them as such. California recently implemented a low-carbon fuel standard and consequently collected much, and perhaps all, of the data required to determine the upstream emissions of imported fossil fuels.⁵

The presence or absence of a provision for carbon capture and storage (CCS) does not impact the treaty analysis. CCS, however, will impact both the domestic and international political calculus and will therefore almost certainly be included in any ***495** domestic mitigation regime, carbon tax or otherwise. In this regard, it should be noted that in the most recent IPCC report all mitigation pathways which avoid a 2C temperature increase are carbon negative no later than 2050.⁶ CCS, which prevents emissions, should not be confused with the removal of carbon dioxide from the atmosphere so as to reduce atmospheric concentration of carbon dioxide. The diplomatic calculus of a carbon BTA should anticipate a shift in climate governance from mitigation to drawdown.

Regulatory and market reforms are necessary to ensure that the Pigouvian price signal can properly course its way through the economy and direct investment and other economic behavior so as to ensure the desired abatement. The list of reforms

involves many aspects of the highly technical, low salience “submerged state.”⁷ For instance, the carbon price signal probably requires that demand-response bids can be submitted to the wholesale electrical market,⁸ that building codes require that houses be PV ready or net-zero,⁹ that wind farmers be allowed at least the same access to eminent domain as fossil fuels,¹⁰ that secondary mortgage markets allow for PACE financing,¹¹ and that fiduciaries be liable for not accounting for climate risk. Because reforms of the submerged state are an important aspect of mitigation and adaptation, they, like drawdown policy, form a part of the diplomatic calculus surrounding the carbon BTA. A lack of appropriate reform can quickly hinder the ability of the carbon price to incentivize the required mitigation and could indeed backfire.

Given the precipitous drop in the cost of renewable energy generation, the reconfiguration of the submerged state towards renewables will become increasingly important in facilitating the transition to a clean energy infrastructure.¹² Further, global warming will place open, egalitarian, and democratic polities under increasing pressure. Indeed, unmitigated global warming will likely stain the Westphalian political ordering *496 into dissolution. In the development of a clean energy infrastructure and the reform of the submerged state, non-fiscal objectives, such as the promotion of “energy democracy” through the wide-spread ownership of power generating assets, should be pursued. The goal would be to protect against the empowerment of reactionaries and authoritarians whose rule, already undesirable, would undermine mitigation efforts beyond irrevocable climate inflection points. Although this paper does not opine upon the necessary reconfiguration of the submerged state, it assumes that they are enacted concomitantly with the carbon tax or, in the case of states, that the carbon tax legislation empowers states to make the necessary reforms.

Further, while the carbon BTA most immediately faces outward towards the community of nations, its usefulness is dependent upon continual domestic mitigation commitments or, in the language of the UNFCCC negotiations, the ability of nations “to progressively enhance the levels of ambition.”¹³ United States trade partners shall also need to reform their respective submerged states, and so this too will become a part of the diplomatic calculus. A diplomatically felicitous carbon BTA will not hinder the efforts of other nations to reconfigure their own submerged states in the pursuit of enhanced mitigation ambition.

Many allocations of the revenue from a carbon tax have been suggested, including tax-swaps, dividend checks, debt reduction, investment in clean energy infrastructure, and the establishment of sovereign wealth funds which might provide citizens with a permanent basic income.¹⁴ Each allocation has its own environmental, political, and diplomatic calculus. Since the treaty analysis is indifferent to the allocation of the revenues from the carbon tax, except that those revenues cannot be used as impermissible subsidies, this paper remains agnostic on those allocations.¹⁵ As discussed in the next section, a treaty compliant carbon BTA credits other countries’ mitigation efforts. Hence, the ideal amount of revenue collected from the carbon BTA is zero and the allocation of those revenues is also left unspecified.

A comprehensive mitigation policy would cover all the greenhouse gases, including those originating from land use and deforestation. While important, they will be bracketed for purposes of this analysis. Other sources of greenhouse gases, such as fugitive methane, are also bracketed. However, EPA’s Mandatory Monitoring and Reporting rules (MMR) can be used to levy a Pigouvian tax on other sources of greenhouse gases. One “simply” identifies which greenhouse gas and which source of *497 that gas one wishes to tax, identifies the global warming potential of that gas, and then references the appropriate regulatory section of the MMR.¹⁶

III. The Architecture of Carbon Border Tax Adjustments

The scholarly literature and proposed legislation contemplate two basic designs of a carbon BTA in the context of a domestic carbon tax. The first levies the carbon BTA on the imported product in an amount equal to the increased cost passed through to a “like” domestic product because of the carbon tax. It also rebates to products exported from the United States an amount equivalent to the increase cost passed through to the exported product because of the domestic carbon tax. This is the “price equivalency” design. Much (perhaps all) carbon tax legislation introduced in Congress has so far relied upon this construction of a carbon BTA.¹⁷ The BTAs on value added taxes seem to provide the model for the price equivalency carbon BTA.¹⁸

The price equivalency design is critiqued in Section X, but its major concern is foreshadowed here. First, in this paper “embedded emissions” shall designate those greenhouse gas emissions brought about in the manufacturing of a particular product. Embedded emissions are different from a fossil fuel’s carbon content. In assigning to imported products a tax amount the same as that passed through to a “like” domestic product because of the carbon tax, the price equivalency design

assumes that the embedded emissions of imported products is the same as that of a “like” domestic product. This means that “like” domestic and foreign products with different embedded emissions are taxed the same amount but at different *rates* per ton of CO₂.

In contrast to the price equivalency design, the rate equivalency carbon BTA imposes the Pigouvian tax upon the embedded emissions of the imported carbon-intensive products at the same *rate* per metric ton of CO₂ as the domestic carbon tax. Exported carbon-intensive products are eligible for rebates in that amount which is the product of the product’s embedded emissions and the rate of carbon taxation during the year of the product’s manufacture.¹⁹ The remainder of this paper argues that the rate equivalency carbon BTA is the preferred construction for purposes of the GATT.

1. The Rate Equivalent BTA

*498 No carbon tax bills hitherto submitted to the Congress rely upon the rate equivalency design. Therefore, some specifics are necessary for further discussion. Since the slate is blank, those details are developed with both mitigation and GATT compliance in mind.

First, much carbon tax legislation identifies a closed set of products which are subject to the carbon BTA. The products are usually those which are “emission-intensive and trade-exposed” (“EITE”) and thus prone to carbon “leakage.” These shall be denominated “carbon-intensive products.”²⁰ Some legislation then allows for the extension of this list based by administrative rule.²¹ Other bills merely allocate the designation of carbon-intensive products to administrative rule.²²

One impulse for identifying a circumscribed set of carbon-intensive articles is administrative feasibility. Others see the designation of an article as “carbon-intensive” as a means for protecting favored domestic industries against unfair competition from jurisdictions which lack carbon pricing. Although protection--or leveling the playing field--might end up being an effect of the carbon BTA, from the perspective of the GATT, it cannot be its rationale.

Rather, there are treaty reasons for using a reliable metric to identify a closed-set of carbon-intensive products. If the carbon BTA needs to be legitimated under one of the GATT General Exceptions in Article XX(b) or XX(g), then the list of carbon-intensive goods shall have to be confined to those vulnerable to leakage. If a product on the list of carbon-intensive products is not in fact vulnerable to leakage, then it cannot be argued that a carbon BTA upon that product has the public health or environmental benefits which justify the carbon BTA under one of the General Exceptions.

Along these same lines, the standard method of determining whether a product is EITE is to construct a metric out of two variables: the percentage of a product’s costs attributable to energy cost and the percentage of that product exported. Products whose energy costs are a high percentage of total cost and of which a large proportion is exported are EITE. The EPA used this methodology to evaluate the border adjustment in the American Clean Energy and Security Act, for instance.²³ In defending the appropriateness of designating an import as “carbon-intensive,” a *499 respondent will have to rely upon a methodology such as this. However, it is worth noting that these methodologies take “energy intensity” as a proxy for “emission intensity” because one of the EITE variables is percentage of cost attributable to energy. Since mitigation policy aims to divorce energy use from emissions, this proxy will become increasingly invalid as decarbonization proceeds.

Second, the rate equivalency carbon BTA levies the tax upon the embedded emissions of imported carbon-intensive articles at the same rate as the internal, domestic carbon tax rate but deducts from this rate the foreign cost of carbon which were not refunded upon export. That is, if the imported carbon-intensive product already paid some form of carbon costs in the jurisdiction of manufacture, the carbon BTA shall account for and credit these foreign cost of carbon, so long as they were not refunded upon export.

Symmetrically, domestically manufactured carbon-intensive products are eligible for a refund upon exportation equal to their embedded emissions times the rate of carbon taxation per metric ton of CO₂ less any foreign cost of carbon which are to be paid upon their importation.

Some commentators worry that such a refund might either be an impermissible export subsidy or reveal the carbon BTA as a protectionist measure.²⁴ With respect to the export subsidy worry, the carbon BTA is much like the refunding of value added taxes and should be found not to be a subsidy for the same reasons. With respect to the second worry, commentators note that

because the export refund strips the Pigouvian price signal from the product upon exportation, the export refund cannot be said to have a mitigation aim.²⁵ As constructed here, however, the foreign cost of carbon to be paid upon importation to the foreign jurisdiction is deducted from the tax rate used to calculate the amount of refund upon exportation. The export refund, then, does not in fact strip the Pigouvian price signal from the exported product, but rather shifts the revenues. This design allows foreign countries sovereignty over their mitigation policy while encouraging them to enact or sustain their own abatement efforts.

Under the rate equivalency design, there are two challenging determinations to make: the embedded emissions of the imported article and the foreign cost of carbon. The importing authority shall have this responsibility, which we may suppose to be Customs, although the technical expertise shall have to come from other agencies. Customs shall need to identify both greenhouse gas lifecycle analysis methodologies *500 and methods for determining the foreign cost of carbon. It shall also need to establish procedures, confidential as needs be, by which importers may challenge a determination of either the embedded emissions of an imported article or the foreign cost of carbon born by that article. The introduction of this administrative procedure allows for the carbon BTA to operate upon the level of the manufacturer.²⁶

Foreign costs of carbon shall be expansively defined to include not only explicit Pigouvian taxation but also cap-and-trade pricing and the implicit pricing associated with subsidies and regulation, if any. Hence, while the “foreign cost of carbon” is expressed in a rate per ton of CO₂-e, in the context of climate diplomacy, it might come to serve as a proxy for a foreign country’s mitigation efforts. This shall allow foreign nations to implement mitigation policies congenial to their circumstances and acknowledges the principle of common but differentiated responsibilities and respective capabilities.

The determination of embedded emissions and the foreign cost of carbon are neither trivial nor strictly technical. Hence, while the rate equivalency BTA is the preferred construction, it may or may not be a simple construction, and a GATT compliant carbon BTA certainly does not negate the need for further diplomacy.

IV. Treaty Arguments

Two basic arguments support the treaty compliance of a carbon BTA. The first is that the carbon BTA conforms with all relevant GATT disciplines: it does not violate the most favored nation disciplines of Article I (MFN), the national treatment disciplines of Article III (NT), or the Agreement on Technical Barriers to Trade (TBT). A carbon BTA is therefore non-discriminatory and non-protectionist *per se*.

However, many scholars are concerned that a carbon BTA might violate at least one of the GATT disciplines. The second set of treaty reasons, then, is that a carbon BTA is permissible under one of the GATT XX General Exceptions.²⁷

1. GATT Compliance of the Rate Equivalency BTA

This section analyzes the rate equivalency BTA against the most likely challenges to its GATT compliance. It begins with the MFN and NT disciplines, but if a panel finds the carbon BTA to be a technical barrier to trade, it might choose to *501 analyze that aspect first.²⁸ The latest jurisprudence, however, suggests that a panel will not analyze the rate equivalence carbon BTA under the TBT.²⁹

a. Most Favored Nation

An importer to the U.S. will argue that the carbon BTA violates the most favored nation disciplines because it grants to the imports of one country an “advantage, favor, privilege, or immunity” without “immediately, and “unconditionally” according it to the “like” product from their own country.³⁰ In the case of a challenge to a rate equivalency carbon BTA, such a challenge would most likely come from an importer whose imported products have higher embedded emissions than the “like” product of a third party importer and are thus liable for a higher amount of carbon BTA. The challenging Member would need to argue that the lower amount of carbon tax levied on the lower carbon content of the “like” product is an advantage which must be immediately and unconditionally accorded to its own “like” product.

b. National Treatment

A Member country challenging the carbon BTA under the national treatment discipline will have at least three arguments available. First, that the carbon BTA “subjects” its products to an “internal tax or internal charge ... in excess of those applied, directly or indirectly, to like domestic products.”³¹ Second, the challenging Member might argue that the carbon BTA imposes an “internal tax or other charge” on a “directly competitive or substitutable product” which is not similarly taxed so as to afford protection.³² Third, the challenging Member may argue that the carbon BTA is a law or regulation affecting the internal sale, offering for sale, purchase, transportation, distribution or use of a “like” product, and that the carbon BTA treats the imported product less favorably than the “like” domestic product.³³ In all three instances, the most likely challenger will be a Member country whose imports have higher embedded emissions than a “like” domestic product and will therefore bear a greater amount of carbon taxation under the carbon BTA than the “like” domestic product.

*502c. Technical Barriers to Trade.

Under the Technical Barriers to Trade, a complainant shall argue that in order to determine the amount owed under the carbon BTA, an importer must determine the embedded emissions of its imported carbon-intensive product. Thus, the importer, or some other entity in the product chain, shall need to complete a greenhouse gas lifecycle analysis (GHG LCA) and then affix a carbon stamp to the product which shall be the tax basis. The argument under the TBT Agreement would be that the GHG LCA violates Article 2.1 and 2.2 because it is a “technical regulation” upon an imported product which treats the imported product “less favorably” than a “like” product of national origin or a “like” product originating in any other country.³⁴

2. “Like” Products

As preamble to these analyses, it is perhaps efficient to deal with one theme common to each of these arguments, namely that of discrimination between domestic products and “like” products of foreign origin. Unsurprisingly, the term “like” has been subjected to a scholastic parsing.³⁵ According to *EC--Asbestos*, inquiries into whether an imported product is “like” a domestic product are to proceed on a case-by-case basis,³⁶ which means a complainant challenging the carbon BTA shall likely argue that their imported carbon-intensive product is “like” some domestic product (in the case of a NT claim) or “like” a product imported from another Member country (in the case of a MFN claim).

In determining whether two products are “like,” the “slant” of the inquiry differs depending upon the particular treaty section under consideration and the context of the policy or measure being analyzed. This four letter word “stretches and squeezes” like an “accordion.”³⁷ However, the “like” jurisprudence under Article I is not extensive and the recent *US-Tuna/Dolphin II* panel deemed it not unreasonable to use the analysis of like product under Article III to inform its interpretation of like product under Article I.³⁸ Under the TBT, however, “to the extent that they are *503 relevant to the examination of certain ‘likeness’ criteria and are reflected in the products’ competitive relationship, regulatory concerns underlying technical regulations may play a role in the determination of likeness.”³⁹

On the likely conclusion that the panel finds the products to be “like,” then the respondent has a large number of arguments available to show that the carbon BTA is treaty compliant. Indeed, in terms of retaining amicable diplomatic relations and mutually beneficial trade while yet aggressively mitigating, such a finding of “like” is probably the preferable result, for this throws low- and high-carbon products into market competition.

3. Are the products “Like”?

According to *EC - Asbestos*, a dispute resolution panel will rely upon four criteria for determining whether two products are “like”:

- (1) the properties, nature, and quality of the products;
- (2) the end uses of the product (3) consumers’ tastes and habits ... in respect of the products; and (4)

international tariff classification.⁴⁰

Except that tariff classifications are usually used as a supplement to any conclusion reached under the first three criteria, there is no hierarchy amongst them.⁴¹

Recalling that the carbon BTA identifies a closed set of carbon-intensive products, it appears that under these four criteria, a challenger will be able to identify two products which are like in every respect except their embedded emissions. The question, then, is whether the embedded emissions of two products will alone suffice to make two products unlike one another.

The rate equivalent carbon BTA implicitly requires that an imported carbon-intensive product come with a carbon stamp identifying its embedded emissions as determined by a GHG LCA. A GHG LCA identifies the amount of greenhouse gases released into the atmosphere in the manufacture (and maybe in the use, discard, and financing as well) of the product. Those greenhouse gas emissions leave no physical trace in that product, or so it can be assumed for the sake of the argument.⁴² Hence, a complainant will be able to show that its imported carbon-intensive product has the *504 same properties, nature, and qualities as some domestic product on the list of carbon-intensive products. Further, it can be concluded that the products have the same end-use, especially since most or all of the prospective carbon-intensive products are wholesale products. Under these conditions, it is also likely that the two products shall fall under the same tariff classification.

Most commentators, then, conclude that whether a GATT panel would find two products to be unlike based upon their embedded emissions depends upon consumers' tastes and habits.⁴³ They also conclude that, since most of the carbon-intensive products subject to the carbon BTA are wholesale products rather than retail products, it will be difficult to marshal evidence that consumers have a "taste" for low carbon products.⁴⁴

Were the respondent interested in showing that the products were "unlike" even though these four criteria were met, it might advance the argument that two products' differential embedded emissions is a treaty compliant ground for identifying products as un-like. This would be an extension of precedent, effectively asking the AB to include a fifth and new element in its criteria for determining likeness. The weight of the jurisprudence is against such a move, but given the novelty of the governance problem posed by global warming, the prospects and implications are worth considering.

On the one hand, in *EC - Asbestos* the AB refused to include "risks to human health" as a fifth criterion but allowed that the risks to human health might be considered under physical differences and consumer tastes criteria.⁴⁵ The panel reasoned that including risks to human health under the inquiry into whether products were "like" would circumvent GATT Article XX(b). On this reasoning, including embedded emissions as a fifth criterion would also seem a circumvention of GATT Article XX(b) and XX(g), and the extension would not be allowed.

On the other hand, in *US--Taxes on Automobiles*, the United States imposed a graduated excise tax upon imported automobiles in accordance with a fuel economy calculated by model type.⁴⁶ The E.C. argued that differences in fuel economy were not sufficient to make two automobiles "unlike" and therefore that the differential tax schedule violated the GATT. The U.S. argued that fuel economy was a permissible criterion for distinguishing products (apparently because of the different environmental impacts brought about by the use of efficient versus inefficient *505 vehicles).⁴⁷ The panel allowed that the regulatory distinction based upon fuel efficiency was sufficient to distinguish between different types of cars. However, as the panel decision was not adopted and the panel relied upon an "aim and effect" test which seems now to be out of favor, the relevance of this decision is unknown.⁴⁸ Were the reasoning persuasive, it would indicate that products with disparate impacts upon the environment and human health could be sufficient grounds for finding them to be unlike one another.

In any case, a determination that two products are like even though they have different embedded emissions is probably the preferred determination from the point of view of greenhouse gas mitigation. It throws low-carbon and high-carbon products into competition with one another and opens up a number of treaty arguments in favor of the carbon BTA, such as that afforded by GATT Article II:2(a).

4. GATT Article II:2(a): "Like" Products and Border Tax Adjustments

Supposing that a panel did find an imported product to be “like” a domestic product, the first argument in favor of GATT compliance is found in GATT II:2(a), which allows for border tax adjustments upon “like” products. The text reads:

Nothing in this Article shall prevent any contracting party from imposing 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;

In *US--Superfund*, the United States imposed a tax upon certain imported chemicals to fund the cleanup of “superfund” sites.⁴⁹ The tax was imposed upon selected imported chemical compounds whose precursor chemicals were taxed domestically although the compounds were not.⁵⁰ The panel concluded that the tax imposed upon the imported chemical compounds “equals in principle the 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 these *506 chemicals had been sold in the United States for use in the manufacture or production of the imported substance.”⁵¹ The panel therefore concluded that the challenged measure was a tax adjustment in conformance to GATT Article II:2(a).

As Pauwelyn and Holzer have noted, after determining that a border adjustment was appropriate, the panel did not inquire further as to whether the imported and domestic chemicals were “like.”⁵² Pauwelyn has read in to the *US-- Superfund* case the possibility that, once a panel has found a carbon BTA to be “equivalent,” it will have no further reason to inquire into whether two products are in fact “like” each other.⁵³ It seems likely that the panel in *US - Superfund* implicitly assumed that the domestic and imported chemical products were like (because of their identical chemical composition), observed that the tax rate on the precursor chemicals was equivalent, and therefore felt no need to inquire further. If they had, then the panel would have needed to revise, and maybe reorder, their inquiry--first asking if the products were “like” and then asking if the border tax was “equivalent.”

If a panel should proceed on this course, then potentially all of the treaty questions raised under the NT disciplines (“like” product, “in excess,”) and the MFN disciplines (“advantage”) will need to be considered before the panel could conclude that the carbon BTA was authorized under GATT II:2(a). Supposing this reading to be correct, a determination that some imported and some domestic product were “like,” then the carbon BTA would conform to GATT II:2(a) as a border tax adjustment so long as it was otherwise “equivalent.” Since the carbon BTA tax rate is the same as the domestic rate (just as in *US-- Superfund*), the equivalent test should be satisfied.

Other commentators find a different hope in *US--Superfund*. The opinion seems to affirm the principle that a domestic tax on the precursor elements of a product can be imposed upon the “like” imported product, even though those precursor elements have previously been aggregated into the imported product and leave no discernible physical trace in the product itself. From this, one may conclude that the precursor greenhouse gas emissions embedded in a “like” imported product may be taxed at the same rate as domestic emissions, even though they leave no detectable physical trace in the imported product.⁵⁴

*507 However, this would require an extension of the *U.S.--Superfund* reasoning, in which the precursor chemicals are at least partially incorporated into the final product, to greenhouse gas emissions, which are not themselves incorporated into the product. Whether or not a panel would feel comfortable with such an extension probably depends upon the degree to which it finds the carbon BTA to otherwise conform to the MFN, NT, and TBT disciplines. Acceptability under GATT II:2(a), then, seems a denouement, not an independent analysis.⁵⁵

V. Most Favored Nation

GATT Article I prohibits a Member country from granting to “like” products of any Member country any “advantage, favor, privilege, or immunity” which is not “immediately” and “unconditionally” granted to all other Member countries. To begin,

we can stipulate that a panel has found two products to be “like” one another. The inquiry, then, will be whether the carbon BTA grants to one Member country an “advantage, favor, privilege, or immunity” which is not “immediately” and “unconditionally” accorded to the complainant. In discussing the “unconditionally” requirement in *EC--Seal Products*, the AB wrote that

as Article I:1 is concerned, fundamentally, with protecting expectation of equal competitive opportunities for like imported products from all Members, it does not follow that Article I:1 prohibits a Member from attaching *any* conditions to the granting of an ‘advantage’ with the meaning of Article I:1. Instead, it prohibits those conditions that have a detrimental impact on the competitive opportunities for like imported products from *any* Member.⁵⁶

Similarly, the AB has interpreted the NT disciplines of Article III as prohibiting detrimental impacts on competitive opportunities. Because of the alignment of the MFN and NT jurisprudence, the analysis begins here but concludes in Section VI.

1. “Advantage”

The tax rate under the rate equivalence carbon BTA does not vary amongst importers and so no advantage is given there. However, both the foreign cost of carbon and the embedded emissions of imported carbon intensive products will vary and so might be an advantage of concern to the treaty interpreter.

***508** Because the foreign costs of carbon are deducted from the domestic carbon tax rate, importers will *de facto* pay a different carbon tax rate when their respective countries of origin have different foreign cost of carbon. The foreign cost of carbon might have been calculated by bureaucratic procedure or set by bilateral or multilateral agreement. In either case, a challenging country might argue that *that* determination was the “advantage” granted to the third party because it had a detrimental impact upon competitive opportunities and must therefore be immediately and unconditionally granted to their imports.

There seem to be two worries about “advantage” and the foreign cost of carbon. First, because the carbon tax and the carbon BTA is a mitigation policy, it seems that in determining the foreign cost of carbon, the priority should be amongst high emitting countries, or those with prospects of soon becoming so.⁵⁷ Many have suggested that the most effective way to mitigate is through the formation of a “club” of mitigators.⁵⁸ Low emitting countries need not join that “club” and therefore should not be subjected to the carbon BTA for many years. Indeed, they may be able to develop a low-carbon energy infrastructure from the beginning and shall not therefore have to do much mitigating. This approach is also suggested by the principle of common but differentiated responsibilities and respective capabilities. If this approach to the carbon BTA is taken it suggests that some countries (“developing”) are being granted an advantage not enjoyed by other countries (“developed”).

The WTO family of treaties acknowledges and incorporates the distinction between developed and developing countries.⁵⁹ The UNFCCC incorporates a similar distinction between Annex I and non-Annex I countries.⁶⁰ Furthermore, in *US--Turtles*, the AB signaled that it is permissible for a country to regulate so as to encourage other countries to undertake their own regulatory reform, but that in doing so the regulating country must take account of the prevailing conditions in different countries.⁶¹ Hence, the *de jure* prioritization of diplomacy amongst high emitting countries seems to be already scribed into international law.

***509** The second worry about “advantage” and the foreign cost of carbon is that a country’s emission profile emerges from the configurations of its political economy and incidents of geography. France, for instance, already relies upon low-carbon nuclear power and Brazil has excellent hydropower resources. The “costs” involved in mitigating shall, therefore, be different for different countries. A methodology for determining the foreign cost of carbon given these different circumstances will always involve relative and “subjective” elements. Determinations made about a country’s foreign cost of carbon will negatively impact the competitive opportunities of the imports originating from some countries and advantage others, or so the argument against the carbon BTA is likely to go.

The real question here, it seems, is less about whether different determinations about the foreign cost of carbon conform to

Article I:1 most favored nations disciplines. Rather, the question is about the generation of agreement on methodologies for determining the foreign cost of carbon (and otherwise measuring a country's mitigation efforts) and which body shall supervise those mitigation commitments.

The AB could conclude, for instance, that the carbon BTA is in *de jure* conformance with the MFN disciplines. It might, nonetheless, go on to question the validity of the agreements reached in the formation of a club of mitigators, asking whether those agreements detrimentally impacted the competitive opportunities of countries not party to the agreements or even amongst the Members. It might make a determination upon its own authority, or it might look to whatever authorized treaty interpreter emerges under the UNFCCC process, deferring to that body.

The point here is that disagreements about the foreign cost of carbon do not undermine the carbon BTA but “merely” recognize that climate governance requires supervision and coordination to harmonize countries' mitigation commitments. Those structures do not yet exist, and the carbon BTA does not institute them. Rather, it attempts to configure international political economy so as to make agreement on those institutions more likely.

The MFN concern associated with the determination of an imported product's embedded emissions is that the embedded emissions of an imported product is so tightly bound to the carbon-intensity of the national grid that it impossible to distinguish between them. The differential embedded emissions of “like” products, then, is *de facto* discrimination based upon national origin. One question, then, is to what degree a panel shall allow the carbon intensity of a country's grid to act as a proxy for national origin.

***510** In *EC - Seal Products*, the EC imposed an import ban on seal products except when the seal products resulted from “hunts traditionally conducted by Inuit and other indigenous communities” (the IC exception) or were the by-products of a marine resource management plan.⁶² The panel concluded, and the AB affirmed, that, under the IC exception, nearly 100% of Greenlandic seal products were likely to be admitted to the EC market, while only 5% of Canadian and 4.5% of Norwegian harvest would be allowed.⁶³ “Thus, in terms of its design, structure, and expected operation, the EU Seal Regime detrimentally affects the conditions of competition on the market of Canadian and Norwegian origin as compared to seal products of Greenlandic origin.”⁶⁴ This suggests that a panel might look behind the comparative carbon-intensity of an imported “like” product to see if that comparative carbon-intensity might be attributable to the national grid.⁶⁵

However, the panel also noted that in certifying certain hunts under the IC exception, the EC seemed to have favored Greenland,⁶⁶ although it did not find this sufficient to violate the treaty.⁶⁷ Further, the panel wrote that

“[t]he IC requirements permit the placing on the market based on conditions relating to the characteristics of seal hunts as opposed to a “closed list” of countries. We also note that some of the communities whose seal products may qualify under the exception are not concentrated in one single country. In light of these considerations, we do not believe that the EU Seal Regime gives rise to discrimination based on origin *per se*.”⁶⁸

***511** On the one hand, the panel's concern about the proportion of products eligible for the IC exception from different jurisdictions indicates that it might seek to determine if the comparative carbon-intensity of an imported product is attributable to the national grid. However, the panel in *EC--Seal Products* also notes that the IC exception targets characteristics of seal hunts and concludes that the IC does not constitute *per se* origin-base discrimination. It seems, then, in inquiring about discrimination, a panel would look to the contingency of the relationship between the national grid and a product's embedded emissions and the process by which those emissions have been identified. The carbon BTA, like the IC exception, contains no “closed list” of countries. Because the carbon BTA determines the carbon content of imports by means of a GHG LCA, it operates upon individual manufacturers. Further, each importer is given access to a process by which they can correct any determination of its product's embedded emissions.

More analysis is provided in the next section on national treatment, but under the MFN, the carbon BTA is designed so as to disassociate the contingent relationship between the embedded emissions of imported carbon-intensive products and the carbon intensity of the national grid. Neither the determination of the foreign cost of carbon nor a product's embedded emissions, then, violates the MFN discipline.

VI. National Treatment

The general concern of the national treatment disciplines is to ensure that Member countries do not discriminate between domestic products and imported products. The NT jurisprudence has trended towards the inquiry of whether a challenged measure modifies the conditions of competition. The NT jurisprudence thus dovetails with the MFN jurisprudence.

1. GATT Article III:2, first sentence

The first sentence of Article III:2 has three elements: whether the challenged measure is an internal tax or other charge, whether there are “like” products, and whether imported products are taxed “in excess of” the like domestic product.⁶⁹ The AB’s interpretation of “in excess” prohibits even *de minimis* excess taxation which has no impact on the trade competitiveness of imported products.⁷⁰

Assuming that a complainant will be able to find two products which are “like” one another, there seem to be two possible challenges under the first sentence of *512 Article III:2. The first involves a textual ambiguity about “direct” and “indirect” taxes. The other involves the use of GHG LCA and taxation in excess of that imposed upon a “like” domestic product.

First, the nature of carbon emissions means that there is at least one asymmetry between the domestic regime and the carbon BTA. On the domestic level, the Pigouvian tax is levied upon the carbon content of fossil fuel. Those emissions (and the associated Pigouvian price signal) are then “passed through” to domestically produced carbon-intensive products. In contrast, the carbon BTA is levied upon the embedded emissions of the carbon intensive products. Hence, the domestic carbon tax arguably does not subject domestic carbon intensive products to any taxation but does subject imported carbon-intensive product to taxation. The carbon BTA levied upon the “like” imported carbon intensive products is therefore “in excess” of that levied upon the “like” domestic carbon intensive product. If a panel were to so find, Article III would be violated and, as a corollary, GATT Article II:2(a) would be inapplicable. The key question seems to be whether a panel would recognize the taxation of passed through emissions as being equivalent to the taxation of a fossil fuel’s carbon content.

The language of Article III prohibits a Member country from subjecting foreign products to “internal taxes or other internal charges of any kind in excess to those applied, directly or indirectly, to domestic products.” No precedent provides clear guidance, but the language (“internal charges,” “direct or indirect”) seem capacious enough to find that the emissions “passed through” to and embedded in domestic carbon-intensive products can be adjusted for under Article II:2(a).⁷¹

According to a 1970 Working Group paper on border tax adjustments, direct taxes are those levied directly on the product, such as excises taxes, sales taxes, and cascade taxes, except that value added taxes (VAT) “regardless of its technical construction (fractioned collection), was equivalent in this respect to a tax levied directly - a retail or sales tax.”⁷² The Working Group gave no general definition of an indirect tax but identified social security and payroll taxes as two instances.⁷³ The Working Group left a large swath of taxation uncategorized, including property taxes, stamp duties, and “taxes *occultes*.” Examples of taxes *occultes* include taxes on advertising, energy, machinery, and transportation.⁷⁴ The Working Group recognized that direct taxation was eligible for border tax adjustment under Articles II:2(a) and made some empirical observations that countries were not, at that time, adjusting for *513 the other sort of taxes. It is difficult to discern a clear normative judgment that tax adjustments on the other tax categories would violate the GATT disciplines.

Commentators relying upon the Working Group paper for guidance have found a carbon tax most analogous to an energy tax and have therefore concluded that a carbon tax is either an indirect tax or a tax *occultes*.⁷⁵ This attempt at analogous reasoning, however, does not seem conclusive. It is apparent, for instance, that in classifying the different taxes the Working Group had in mind only the conventional economic categories and gave no consideration to Pigouvian or “environmental” taxation. There seems to be plenty of leeway for a panel to conclude that the taxation of the passed through emission of an imported carbon-intensive product is an indirect tax equivalent to the domestic tax on a fossil fuel’s carbon content.

Custom and usage do not seem to have resolved the issue. The trade promotion authority passed by the Congress in the Spring of 2015, for instance, includes language directing the trade negotiator to further clarify the question of direct and indirect taxation, presumably because that clarification is already embedded in the negotiated text.⁷⁶ For what it is worth, as displayed on wikileaks, the “core text” of the Trade in Services Agreement (TiSA) says that:

“direct taxes” comprise all taxes on total income, on total capital or on elements of income or of capital, including taxes on gains from the alienation of property, taxes on estates, inheritance and gifts, and taxes on the total amounts of wages or salaries paid by enterprises, as well as taxes on capital appreciation.”⁷⁷

While a carbon tax is not on this list, a treaty interpreter need not take it as exclusive of other types of taxation, such as environmental tax, especially since the treaty is limited to the trade in services. Further, the TiSA is a free trade agreements and cannot be in derogation of GATT disciplines. Hence, if a carbon BTA is otherwise GATT compliant, a free trade agreement cannot alter that fact.

In sum, as with the judgment about the applicability of Article II:2(a) to the carbon tax, it seems as if the judgment about whether a carbon tax would be “direct,” “indirect,” or “*occultes*” would depend upon whether the treaty interpreter found the carbon BTA to be otherwise non-protectionist and non-discriminatory.

***514** The second concern about the “in excess” criteria concerns the use of greenhouse gas lifecycle analyses. Suppose it is agreed that the domestic carbon tax satisfies the “direct” and “indirect” requirement and is adjustable under GATT II:2(a). There might be a differential tax burden upon imported and domestic carbon intensive products if the GHG LCA methodologies used to identify the embedded emissions of carbon intensive products result in inaccurate or unreliable outcomes. That is, there might be a differential tax burden imposed upon “like” domestic and foreign products and between “like” foreign products imported into the United States, if different GHG LCAs were used to identify the embedded emissions of “like” products. Likewise, if the GHG LCAs were uniform but applied unreliably, the carbon BTA would impose a differential tax burden in violation of the prohibition of “in excess” taxation.

This worry seems analogous to the worry about the foreign cost of carbon discussed above under the MFN discipline. It does not undermine the compatibility of the carbon BTA with the GATT but rather indicates that the use of GHG LCA must be subjected to authoritative supervision. Hence, various bodies, including the International Organization for Standards and the UNFCCC, are already developing uniform, reliable, and verifiable GHG LCA methodologies so as to assure mitigation and transparency. Whether the WTO has the capability to provide this supervision is unclear, and an alternative body competent for such supervision might emerge from the UNFCCC negotiations. Hence, worries about the reliability of GHG LCAs do not undermine the compatibility of the carbon BTA with the GATT. Instead, they indicate the necessity of creating authoritative institutions to supervise their implementation.

In sum, a panel is likely to be able to identify a domestic and foreign origin carbon intensive product as “like” one another, and then proceed to consider whether the taxation upon the imported product is “in excess” of that imposed upon the “like” domestic product. Although the nature of greenhouse gas emission means that there is an asymmetry in the implementation of the domestic carbon tax and the carbon BTA, the treaty language is sufficiently capacious to accommodate that asymmetry. Further, any unreliability or inequities involved in the application of GHG LCA should be supervised and corrected by an authoritative body, perhaps the AB but also perhaps some body instituted under the UNFCCC negotiations.

2. GATT III:2, second sentence

In the unlikely chance that a panel does indeed find two products to be unlike each other because of their differing embedded emissions, the complainant will nonetheless be able to argue that the carbon BTA violates GATT Article III:2, second sentence and Note *Ad* Article III.⁷⁸ Although I think this an unlikely conclusion, a part ***515** of this analysis dovetails with Article III:4, which is almost certainly applicable to the carbon BTA. According to *Japan--Alcohol*, under the second sentence of Article III:2, even if two products are not “like,” a measure may be found to violate the nation treatment discipline when:

- 1) there is an “internal tax or other charge”

- 2) the products are “directly competitive or substitutable”

- 3) the products are not “similarly taxed” (with a *de minimis* exception)

4) the tax is “applied so as to afford protection”⁷⁹

The panel will almost certainly identify the domestic carbon tax as an internal tax or other charge, satisfying the first criteria.

As for the second criteria, in previous cases the panel has analyzed data on the “elasticity of substitution” between unlike products to assess whether they are “directly competitive or substitutable.”⁸⁰ However, in *Korea-Taxes on Alcoholic Beverages* the AB declined to identify cross-price elasticity as the only metric for evaluating whether two products are directly competitive or substitutable.⁸¹ Since the carbon BTA identifies specific carbon-intensive products, most of which are wholesale, it seems that a complainant will likely be able to marshal strong evidence in favor of two products being “directly competitive or substitutable.”

With respect to the third criteria, the same considerations regarding the asymmetry between the domestic carbon tax and the carbon BTA are applicable to this language. Assuming that the issue of “direct” and “indirect” taxation, however, is resolved, it will be difficult for a challenger to prove that the products are not similarly taxed. The “similarly taxed” standard is more lenient than the “in excess” standard deployed under Article III:2, first sentence.⁸² Since the tax rate for the carbon BTA and the domestic carbon tax are exactly the same, the “similarly taxed” criteria should be satisfied.

The last criterion prohibits taxation which is “applied so as to afford protection.” The Article I:1 MFN disciplines which prohibit a Member from granting an “advantage” without “immediately and unconditionally” granting the same advantage to other GATT Members has been interpreted so as to dovetail with this last criterion. Article III:4 has also been similarly glossed. Since Article III:4 is undoubtedly applicable to the proposed carbon BTA, the discussion now turns to that ***516** clause, analyzing whether the carbon BTA modifies the conditions of competition so as to afford protection.

3. GATT Article III:4

Under the Article III:4 jurisprudence developed in *US - Tuna/Dolphin II* and *EC--Seal Products*, a complainant must show:

- (i) that the imported and domestic product are “like products”; (ii) that the measure at issue is a “law, regulation, or requirement affecting the internal sale, offering for sale, purchase, transportation, distribution, or use” of the products at issue; and (iii) that the treatment accorded to imported products is “less favorable” than that accorded to the like domestic products.⁸³

Again, criteria (i) is most likely satisfied. Since the AB has interpreted criteria (ii) broadly,⁸⁴ the regulations implementing the methodology for the GHG LCA are likely to satisfy criteria (ii). As discussed in Section IX, the recent TBT jurisprudence from *EC--Seal Products* suggests that the TBT shall not be applicable in this case, so that the AB might be more inclined to find a GHG LCA to be a law or regulation. The pith of this analysis, then, is whether the carbon BTA accords to imported products treatment “less favorable” than that accorded to the like domestic product.

a. Less Favorable Treatment.

According to *US--Clove Cigarettes*, the no less favorable condition of Article III:4 “prohibits WTO Members from modifying the conditions of competition in the marketplace to the detriment of the group of imported products vis-à-vis the group of domestic like products.”⁸⁵

First, as a seeming preliminary matter, the jurisprudence under Article III:4 indicates that a treaty interpreter should inquiry into whether the alleged detrimental impact upon the conditions of competition results from the challenged measure or is attributable to some other factor, although the jurisprudence seems unsettled here.^{86*}**517** In *Dominican Republic-- Cigarettes*, for instance, the AB wrote that “the existence of a detrimental effect on a given imported product resulting from a measure does not necessarily imply that this measure accords less favorable treatment to imports if the detrimental effect is explained by factors or circumstances unrelated to the foreign origin of the product, such as the market share of the importer in this

case.”⁸⁷ In *Thailand--Cigarettes*, the AB maintained that under Article III:4 “there must be in every case a genuine relationship between the measure at issue and its adverse impact on competitive opportunities for imported versus like domestic products to support a finding that imported products are treated less favourably.”⁸⁸ In footnote 372 of *US-- Clove Cigarettes*, the AB rejected the contention (from the U.S.) that a panel should inquire “whether ‘the detrimental effect is unrelated to the foreign origin of the product’” but did not reject that there must be a “genuine relationship.”⁸⁹ Hence, it appears that for there to be less favorable treatment, there must be a genuine relationship between the challenged measure and the alleged detrimental impact, but a panel should not focus solely on a products’ foreign origin.

Further, the AB has required that in determining whether there is a detrimental impact, a panel is to compare *groups* of like products rather than some arbitrary pairing.⁹⁰ A panel, therefore, would not compare, for instance, how the carbon measure impacts a particular higher carbon import relative to a lower carbon “like” domestic product but rather the entire group of like foreign and domestic products.

Under this jurisprudence, it will be difficult for an importer challenging the carbon BTA to show that an alleged detrimental impact upon its imports is attributable to the carbon measure rather than the comparative carbon-intensity of its imports. First, the purpose of the carbon measure is to alter the conditions of competition to the favor of low-carbon products and production. The carbon measure is a mitigation effort and as such it aims to recruit markets in this effort. Hence, under the carbon measure some subset of the group of imported carbon-intensive products (those which are comparatively more carbon-intensive) will fare less well than some subset of like domestic products in the relevant market. Conversely, some subset of imported carbon-intensive products will fare better than some subset of like domestic carbonintensive products in the same market. The carbon measure reconfigures the “conditions of competition in the marketplace” towards mitigation. Any alleged detrimental impacts are therefore attributable to the comparative carbon-intensity of products. Like “market share” in *Dominican Republic-- Cigarettes*, comparative carbonintensity is unrelated to the foreign origin of the product. Further, that some imported *518 products will fare better than some domestic “like” product and that some domestic products will fare worse than some imported “like” product makes it difficult to show a “genuine relationship” between the carbon measure and the alleged detrimental impact.

As with the MFN inquiry under “advantage,” one might attempt to link the alleged detrimental impact suffered by a group of “like” imported products with the foreign origin of those products by observing that some national grids are more carbon-intensive than others and that the carbon-intensity of those grids depend upon geographical contingencies not subjected to alteration by governance. This association between the carbon-intensity of the national grid and the embedded emissions of the imported product is so tight that one may conclude that the alleged detrimental impact upon the condition of competition is attributable not to the embedded emissions of the imported product but to the national origin of that imported product. Hence, there is a genuine relationship between the carbon measure and the alleged detrimental impacts on the conditions of competition.

There are two responses, both built into the architecture of the carbon measure. The first is that the carbon BTA allows importers to petition for a revision of a determination of the embedded emissions of its imported product. Hence, the carbon BTA operates upon the level of individual manufacturers, not national grids.

The second response is that under the carbon BTA the rate of taxation upon carbon dioxide is the domestic rate per ton of CO₂ less the foreign cost of carbon paid in the jurisdiction of manufacturer, so long as those foreign cost of carbon were not refunded upon exportation. An importer would then have zero carbon BTA liability if their national or sub-national governments have implemented mitigation policies which result in a foreign cost of carbon equivalent to the domestic U.S. carbon tax rate. Since the definition of the foreign cost of carbon allows flexibility in implementing mitigation policies, sovereign nations, even those with high carbonintensity national or regional grids, retain power over both the rate and amount importers from their jurisdiction might pay in carbon BTA. Indeed, were the jurisdiction of export to implement mitigation policies with a higher cost of carbon than the domestic carbon tax rate, then as a matter of theory, the importer would be owed money upon importation. This emphasizes both that the carbon BTA is not protectionist and that diplomacy, rather than a technical determination, will be needed to resolve question about the foreign cost of carbon.

***519VII. Summary of MFN and NT Arguments: Policy Architecture and Political Economy**

In making a finding of discrimination, panels have often inquired into the “design, architecture, and revealing structure” of a

challenged measure.⁹¹ They have also found it significant to discern if the challenged measure manifests a “single regulatory regime.”⁹²

As Meltzer and Porges recognize, and which political economy has long taken as a foundational principle, the “conditions of competition in any marketplace” are partially constituted by the legal and regulatory framework in which commerce occurs.⁹³ To the extent that the GATT inquiry regarding the conditions of competition depends upon the identification of a fictional, pre-political “market” into which the state “intervenes,” the inquiry benefits the incumbent to the extent that this point of view makes it difficult to identify how the “market” has already been configured to the incumbent’s interests. This is especially so for the electrical power sector, with highly technical market structures rooted deep in the submerged state. The point of view of political economy takes the actual material, legal, and ideological structures of particular markets into account. Besides “competition” or “protection” or “discrimination,” political economy therefore has available to it a fuller range of values with which it can evaluate law and markets.

The most favored nation and national treatment analyses present above has largely assumed the vocabulary and norms of the GATT and its’ interpreters-- largely a neo-liberal discourse focused on competitive markets. In contrast, one resolution of the question about whether the carbon measure has modified the conditions of competition is “simply” to acknowledge that the world has embarked upon the legitimate project of decarbonization, and that the carbon measure manifests a “design, architecture, and revealing structure” which facilitates the transition to a post-carbon world. It is a non-protectionist, non-discriminatory “single regulatory regime” which prices carbon, facilitates reform of the submerged state, and encourages further climate diplomacy.

The carbon BTA should incite a virtuous decarbonization feedback. To keep exports internationally competitive, emission-intensive manufacturers will have the incentive to work with their local grids to decarbonize, which resultantly decarbonizes the remainder of the grid. They also have reason to work with their sub-national or national government to implement mitigation policies which price carbon or otherwise reduce emissions. Capital flows should seek locales with fair but aggressive mitigation *520 regimes. The same set of incentives would operate domestically as well. One might even suppose that in politics actively decarbonizing, climate-conscious leadership will arise and develop mitigation and adaptation strategies which might make their territories desirable places to live during the transition to the post-Holocene climate.

Configuring fair and inclusive markets remains, of course, important values for the organization of society’s productive capacity so as to allow for widely-shared material prosperity, especially as global warming places that material prosperity under increasing threat. Political economy allows for the identification of how presently existing, actual markets benefit incumbents, rather than assuming that the present “market” is already fair and inclusive. The carbon BTA conforms to all of the relevant GATT disciplines, but it also invites treaty interpreters to recognize decarbonization as a valid normative aim for the reconfiguration of presently existing markets.

VIII. Article XX General Exceptions

Some scholars conclude that border measures on carbon would violate either NT or MFN disciplines of the GATT and therefore think that they would need to be justified under the Article XX General Exceptions.⁹⁴ The rate equivalency BTA is designed to conform to the relevant GATT disciplines, but since the question is novel, I sketch the Article XX General Exception arguments here. Further, the TBT has been interpreted so as to include an inquiry very much resembling the GATT General Exceptions inquiry, and I consider the TBT in the next section. Further, a presentation of the General Exception arguments allows for a more definitive comparison to the price equivalency BTA in Section X.

1. Article XX(b)

Under Article XX(b), a defendant party bears the burden of showing that a challenged measure is “necessary to protect human, animal or plant life or health.”⁹⁵ In evaluating whether a measure is “necessary,” the AB will deploy a definition of “necessary” that operates upon a “continuum”⁹⁶ and it will “weigh and balance” the objectives of the challenged measure against the trade restrictiveness of the challenged measure.⁹⁷ The more vital or common the value or interests served by the challenged measure, the more tolerant the AB will be towards trade restriction.⁹⁸ The AB appears to be deferential and non-intrusive in its evaluation of a country’s identification of a *521 measure’s policy objective as well as the level of

protection a party aims for.⁹⁹ The AB will also not evaluate the challenged measure by itself, but will take account of the greater policy context in which the challenged measure operates.¹⁰⁰ Finally, the jurisprudence indicates that in challenging a measure, it is the challenging party who must proffer alternative measures which are less trade-restrictive but also achieves the defendant party's desired level of protection.

For instance, in *Brazil-Tyres*, the leading case on Article XX(b), the AB found that Brazil's import ban on tires was necessary to protect human health. It agreed with the Panel that the aim of the import ban was to reduce "exposure to the risks to human, animal, or plant life or health arising from the accumulation of waste tyres."¹⁰¹ The AB also agreed that "few interests are more 'vital' and 'important' than protecting human beings from health risks, and that protecting the environment is not less important."¹⁰² Although the measure, an import ban, was as trade restrictive as possible, the AB found that Brazil had developed a "comprehensive strategy to deal with waste tyres" and that the import ban was a "*key element* of this strategy."¹⁰³

The AB rejected the EC's proposed alternative of enhancing domestic policy to encourage retreading of used tires. Noting that Brazil's policy already encouraged retreading, the AB stated that "substituting one element [of Brazil's] comprehensive policy for another would weaken the policy by reducing the synergies between its components, as well as its total effect."¹⁰⁴

The policy objective of the carbon measure is to prevent carbon leakage, enhance mitigation, and preserve a stable climate. The policy objective is vital, important, and shared by the community of nations. The carbon BTA places *de minimis* restrictions upon international trade, especially when considering that in other trade disputes under Article XX(b) the challenged country has implemented import bans as mechanism for achieving the objective of the policy.¹⁰⁵ The carbon BTA is a key element of a comprehensive greenhouse reduction policy, and it can be expected to contribute to the achievement of the goal of reducing global greenhouse gas emissions. There is thus a "genuine relationship of ends and means between the objective pursued and the measure at issue."¹⁰⁶ The only alternative which seems available to a challenging party to suggest is a domestic carbon tax without a carbon BTA. The AB, *522 however, has seemingly rejected the suggestion that merely enhancing other features of a policy might function as an adequate substitute. The case, then, for GATT compliance under Article XX(b) is strong.

2. Article XX(g)

The proposed carbon BTA also fares well under the Article XX(g) exception, which allows for Member countries to implement otherwise non-compliant measures when it is one "relating to the conservation of exhaustible natural resources if such measure are made effective in conjunction with restrictions on domestic production or consumption."¹⁰⁷

First, the carbon BTA would be made effective in conjunction with restrictions on domestic production or consumption, since it is designed to be symmetric with a domestic carbon tax. In *US-Gasoline*, the AB explained that the requirement that a policy aimed at preserving an exhaustible natural resource be "made effective in conjunction with restrictions on domestic production and consumption" requires "even-handedness" but not "identical treatment."¹⁰⁸ As Holzer argues, this means that "the carbon-restrictive measure should be applied to domestic products as well, but, at the same time, there is no requirement that the measures must be applied to imported and domestic products equally."¹⁰⁹ Although the carbon BTA aims to tax carbon-intensive imports at the same rate, this allowance for "even-handedness" might be needed to address the asymmetry between the domestic tax, which is upon a fossil fuel's carbon content, and the carbon BTA, which is levied upon the embedded emissions of imported carbon-intensive products. The requirements of "even-handedness" might also be needed to account for any concerns over the determination of the foreign cost of carbon and the embedded emissions of imported carbon-intensive articles.

Second, previous panels and the AB have deployed an "evolutionary" understanding of the term "exhaustible natural resource."¹¹⁰ The AB has found both turtles and clean air to be exhaustible natural resources.¹¹¹ Further, the AB has looked to other international treaties for guidance as to what the international community *523 considers to be an "exhaustible natural resource."¹¹² Although it is unclear whether a future panel or AB would follow this procedure, the on-going negotiations under the UNFCCC provide strong evidence that the international community does indeed consider a stable climate to be an exhaustible natural resource. Finally, as Holzer notes, not only is a stable climate likely to be found to be an exhaustible natural resources, but global warming leads to the depletion and destruction of other exhaustible natural resources, such as forests, fisheries, and reliable water supplies.¹¹³

Third, the carbon BTA “relates” to the policy objective of mitigating greenhouse gas emissions, preventing leaking, and preserving a stable climate. In determining whether the “related to” requirement is met, a panel will “look [] into the relationship between the measure at stake and the legitimate policy of conserving natural resources.”¹¹⁴ In *US-Shrimp/Turtles*, for instance, the AB found the means-and-ends relation between the import ban and the goal of conserving turtles to be sufficiently tight because the U.S. statute and its implementing Guidelines did not prohibit the importation of shrimp which were caught in a manner not harmful to turtles.¹¹⁵

An important coda to both of the Article XX exception arguments, is that they depend upon the list of carbon-intensive products being restricted to those for which there is good evidence that they will generate leakage. The inclusion of products which do not pose a threat of “leakage” would signal a protectionist aspect to the carbon BTA.

Between an Article XX(b) exception argument and an XX(g) argument, XX(b) is to be preferred. The terms and language of XX(g) are grounded in extractivism, a mode of governmentality which is unlikely to contain the concepts, institutions, and attendant habits which might lead to sufficient mitigation or adaptation. In contrast, the straightforwardness of the Article XX(b) argument grounds its normativity in the immanency of human needs and human well-being.

3. Article XX Chapeau

Article XX contains perambulatory language, commonly referred to as the “chapeau”. Once a treaty interpreter has found that a measure is provisionally justified under one or more of the General Exceptions, the respondent must then show that the measure is “not applied in a manner which would constitute a means of arbitrary *524 or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.”¹¹⁶ As the AB noted in *US--Gasoline*, the chapeau “cannot logically refer to the same standard(s) by which a violation of a substantive rule has been determined to have occurred.”¹¹⁷ Nonetheless, while the AB has said that the standards for a substantive violation of the GATT and the chapeau are different, it has allowed that the discrimination identified in the substantive analysis can be the same as the discrimination to be analyzed under the chapeau.¹¹⁸

Hence, without the details of a specific violation of NT or MFN an analysis is not possible, but some broad considerations indicate the direction in which the carbon BTA should be implemented to ensure compliance with the chapeau.

Past ABs have seemed to focus on the application of the measure, whether the measure accounts sufficiently for the conditions prevail in differing countries, and the degree to which the measure might be coercive. It has also focused on whether the discrimination “can be reconciled with, or is rationally related to, the policy objective with respect to which the measure has been provisionally justified.”¹¹⁹ For instance, in *EC--Seal Products*, the AB discussed the US import ban at issue in *US-- Shrimp/Turtles*. It found three aspects of that ban to manifest arbitrary and unjustifiable discrimination:

- (i) “the ‘rigid and unbending requirement’ that countries exporting shrimp into the United States must adopt a regulatory programme that is essentially the same as the United States programme; (ii) the fact that the discrimination resulted from the failure to take into account different circumstances that may occur in the territories of other WTO members, in particular, specific policies and measures other than those applied by the United States that might have been adopted by an exporting country for the protection and conservation of sea turtles; and (iii) the fact that, while the United States negotiated seriously with some WTO members exporting shrimp into the United States for the purpose of concluding international agreements for the protection and conservation of sea turtles, it did not do so with other WTO members.”¹²⁰

*525 The carbon BTA is not rigid and unbending. Under the rate equivalency carbon BTA, importing nations are to be credited for their mitigation efforts by deducting the foreign cost of carbon from the carbon BTA tax rate. Further, the foreign cost of carbon is defined in an open fashion specifically to accommodate the differing conditions in different countries. There is no import ban and no requirement that any importing country implement a specific regulatory regime, unlike in *US--Shrimp/Turtles*. It seems as if the first worry canvassed by the AB in its discussion of *US-- Shrimp/Turtles* is not an issue here.

As for initiating subsequent diplomatic efforts after the implementation of the carbon BTA, if the United States were to

institute a carbon BTA and then fail to engage on further questions of climate governance, censure from the AB--or another adjudicative body--would be appropriate. Hence, to facilitate climate diplomacy, one might consider pairing the carbon BTA with a process similar to trade promotion authority.¹²¹ This would signal the United State's commitment to climate diplomacy and give to the Department of State those resources needed for successful conclusion of bilateral and multilateral mitigation agreements.

IX. Technical Barriers to Trade

The implementation of the rate equivalency carbon BTA requires the quantification of an imported carbon-intensive product's greenhouse gas emissions. This, in turn, requires the performance of a GHG LCA. In *EC--Seal Products*, the AB clarified its TBT Agreement jurisprudence in such a way as to make it unlikely that the TBT would be applied to the carbon BTA. The ambiguity had been about the legal status of "process and production methods" (PPM). Under that clarification, there is a high probability that a panel shall find that a GHG LCA, a PPM, is not a "technical regulation."

According to Annex 1.1 of the TBT Agreement, a "technical regulation is a [d]ocument which lays down product characteristics or their related processes and production methods, including the applicable administration provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requires as they apply to a product, process or production method."¹²²

***526** According to *EC - Sardines*, three criteria must be met if a "document" is to be a technical regulation:

First, the document must apply to an identifiable product or group of products. The *identifiable* product or group of products need not, however, be expressly *identified* in the document. *Second*, the document must lay down one or more characteristics of the product. They may be prescribed or imposed in either a positive or a negative form. *Third*, compliance with the product characteristics must be mandatory.¹²³

The required greenhouse gas LCA satisfies the first criteria because it applies to carbon-intensive products, which are an identifiable (and identified) group of products. The GHG LCA will also be found to be mandatory because the carbon BTA cannot be administered without it, satisfying at least one part of the third criteria.¹²⁴

There is some question, however, as to whether a panel would consider a GHG LCA as "lay[ing] down one or more characteristic of the product" per the second and third criteria. Further, the *EC-Sardines* gloss of Annex 1.1 to the TBT does not mention PPMs, although they are mentioned in the treaty language. The gloss, therefore, seems incomplete.

The AB in *EC--Seal Products* has attempted to clarify the relationship between the requirement that the "document" set out product "characteristics" and the other treaty language identifying "their related processes and production methods, including the applicable administration provisions."¹²⁵ Two interpretive choices are available. On the first, the PPM language would refer to process and production methods *simpliciter*. On this interpretation, a GHG LCA would most likely be considered a technical regulation, and the TBT would apply to the carbon BTA. On the second, the PPM language in the Annex requires a connection or nexus between a product characteristic and the PPM which resulted in that characteristic.¹²⁶ The AB in *EC--Seal Products* opted for the second interpretation, writing, "[i]n order to determine whether a measure lays down related PPMs, a panel thus will have to examine whether the process and production methods prescribed by the measure have a sufficient nexus to ***527** the characteristic of a product in order to be considered related to those characteristics."¹²⁷ Hence, the PPMs mentioned in the TBT are only those which have a "nexus" with a product characteristic.

In turn, the definition of "characteristics" seems to exclude "embedded emissions." In *EC--Asbestos*, the AB said that "characteristic" includes "objectively definable 'features', 'qualities', 'attributes', or other 'distinguishing mark' of a product."¹²⁸ So defined, it seems unlikely that a panel would consider embedded emissions to be a characteristic.

Similarly, in its discussion of the "applicable administrative procedures," the AB in *EC--Seal Products* applied a narrow

reading. It limited the administrative procedures to those “to be applied by virtue of a governmental mandate in relation to either product characteristics or their related processes and production methods.”¹²⁹ If the embedded emissions of a product are not a characteristic, then there could be no nexus between that non-characteristic and the GHG LCA used to identify it. Likewise, there could be no nexus between the non-characteristic and the administrative procedures necessary to perform that GHG LCA.

However, while the AB seems to opt for the narrow interpretation of the first sentence of TBT Annex 1.1, its interpretation of the second sentence of Annex 1.1 seems to allow for a more capacious set of technical regulations. The list in the second sentence could be taken as examples of technical regulation identified in the first sentence. The second sentence, then, would not expand the definition of technical regulation. However, the AB in *EC--Seal Products* interprets the list in the second sentence as “elements that are additional to, and may be distinct from, those covered by the first sentence of Annex 1.1.”¹³⁰ Especially since this second sentence does not include the word “their” (which is one of the signals the AB used to find there to be a “nexus” requirement in the first sentence),¹³¹ a panel might find that the GHG LCA required to administer the carbon BTA is a type of labeling requirement (i.e., a carbon stamp) and therefore a technical regulation under the second sentence of the Annex.

However, this might not be the most natural reading, and the AB’s review of the panel’s decision in *EC--Seal Products* suggests that a panel would not make such a move. In that case, the AB wrote that the panel “discussion ... gives the impression that the Panel treated the identity of the hunter, the type of hunt, and the purpose of *528 the hunt as ‘product characteristics’ within the meaning of Annex 1.1.”¹³² The identity of the hunter, the type of hunt, and the purpose of the hunt are all, like a GHG LCA, facts about how a product was brought into being. Moreover, narrowing the scope of the TBT Agreement allows for judicial efficiency since a panel shall now have the analytics necessary to more precisely distinguish between GATT III:4 and TBT claims. So, while a panel might identify a GHG LCA as a “technical regulation” under the TBT Agreement, it seems more likely that a panel will find jurisdiction under GATT III:4, which is undoubtedly applicable to the GHG LCA.

On the slim chance that a panel finds the GHG LCA to be a “technical regulation,” it will then inquire whether the imported product is accorded “treatment no less favorable” than that accorded to “like products of national origin and to like products originating in any other country.”¹³³ At this point, the analysis under the TBT Article 2.1 and 2.2 substantially overlap with the GATT III:4 analysis, and since there is a fair chance a panel shall not reach this inquiry, the argument is only sketched below.

In *US--Clove Cigarettes*, the AB instructed that a panel “seek to ascertain whether the technical regulation at issue modifies the conditions of competition in the market of the regulating Member to the detriment of the group of imported products vis-à-vis the group of like domestic products.”¹³⁴ If a panel does find detriment, it will then consider whether that impact “stems exclusively from a legitimate regulatory distinction.”¹³⁵ The AB has further interpreted “legitimate” to include the general exceptions of GATT Article XX.¹³⁶ The AB has recently emphasized the differences between the TBT and the Article III:4 inquiries, and a panel might find that the “law or regulation” at issue under GATT III:4 to be different than the “technical regulation” under consideration in a TBT analysis.¹³⁷ In the case of a carbon BTA, however, it seems that only the GHG LCA would be identified for analysis and that the analysis under the two treaty texts would overlap completely.

X. Analysis of the Price Equivalency Design

The second possible design for a carbon BTA is to levy the carbon tax upon an imported carbon-intensive product in an amount equal to the additional costs caused by a carbon tax and which are passed through to a “like” domestic product. *Delaney’s Tax Pollution, Not Profits Act of 2015* provides an instance of this design.¹³⁸*529 The brief critique here of that bill’s carbon BTA is meant to provide a contrast with the rate equivalency design.

1. H.R. 2202, Domestic Pigouvian Tax Design

Section 4691 of H.R. 2202 levies a Pigouvian tax upon “fossil fuel products” and also uses the EPA mandatory monitoring and reporting rules to levy a greenhouse gas tax on other emissions.¹³⁹ The bill assigns to the Secretary of the Treasury the administrative responsibility of identifying the point at which the carbon tax shall be levied.¹⁴⁰

2. Border Adjustment

H.R. 2202 implements a price equivalency design, requiring the Secretary of the Treasury to identify the increased cost incurred by a domestically produced good because of the carbon tax and then levying that amount upon the like imported good. The bill leaves the identification of which goods are to be subjected to the carbon BTA to administrative rule making.

As for imports,

in the case of any good imported into the United States that would have had an increased cost imposed by section 4691 had that good been produced in the United States, the Secretary may impose an equivalency fee on the person importing such good equivalent to the tax that would have been imposed under section 4691 at any point in the supply chain of that good, had that good been produced in the United States.¹⁴¹

As for exports,

In the case of any good exported from the United States, the Secretary may provide an equivalency refund to the person exporting such good equal to the cost associated with the tax imposed in section 4691.¹⁴²

***530** In both cases, the power to either impose the carbon BTA or distribute the refund is discretionary (“may”), and section 4691(c) grants the Secretary power to establish the necessary rules and regulations. In terms of the carbon BTA, this mechanism attempts to equate the amount paid by importers and domestic producers on “like” products due to the domestic carbon tax’s pass through costs, if any. To make the contrast explicit, under the rate equivalency design, the carbon BTA is collected upon the embedded emissions of the imported carbon-intensive product.

3. MFN and NT

Price equivalency carbon BTAs attempt to identify the increase cost born by a product because of the domestic carbon tax and then levy that same cost increase upon imported “like” products. This method, then, implicitly assigns to imported “like” products the same embedded emissions as the domestic product. However, an imported “like” product might in fact have a embedded emissions either smaller or larger than that of the domestic “like” product. An imported “like” product might also have embedded emissions greater or smaller than an imported “like” product from a third party also importing into the United States.

This indifference to the actual embedded emissions of imported products means that a price equivalency carbon BTA implicitly levies the carbon BTA upon imported “like” products at different tax rates. Suppose two imports of “like” products to the United States, one with embedded emissions of five metric tons CO₂-e (product A) and another with embedded emissions of ten metric tons CO₂-e (product B). Suppose also a domestic carbon tax rate of \$20/ton. Also suppose that a domestic product which is “like” products A and B has embedded emissions of seven CO₂-e (product D). If the entirety of the carbon tax is passed through to the cost of product D, then product D’s passed through cost are \$140 = \$20x7. In this scenario, the price equivalency carbon BTA levies \$140 upon both product A and B. Hence, the carbon tax rate for product A is \$28 = \$140/5 and the carbon tax rate for product B is \$14 = \$140/10.

Under the NT disciplines, any excess taxation of a “like” imported product is prohibited, even if *de minimis* and with no impact upon competitive opportunities. Further, the second sentence of Article III:2 prohibits non-similar taxation between products which are “directly competitive or substitutable.” The AB would not find a carbon BTA with a differential tax rate upon either “like” products or “directly competitive of substitutable” products to be treaty compliant.

The challenge under the MFN disciplines is similarly strong. A challenging Member will claim that the U.S. carbon BTA accords to the third party importer an “advantage” (a lower tax rate per metric ton of CO₂-e) which is not “immediately and ***531** unconditionally” granted a “like product originating in or destined for the territories of all other contracting parties.”¹⁴³

In our example from above, Member country of product A (with a tax rate of \$28/ton) will point to product B (with a tax rate of \$14/ton) for evidence of “advantage.” This will be hard to dispute.

In violation of MFN and NT, then, the U.S. would have to rely upon one of the Article XX General Exceptions, but the price equivalency carbon BTA cannot meet those standards, or at least, cannot meet those standards as well as the rate equivalency carbon BTA.

4. Article XX General Exceptions

Under an Article XX(b) defense of a price equivalency BTA, the U.S. shall have to show that the carbon BTA is “necessary to protect human, animal or plant life or health.”¹⁴⁴ The carbon BTA is a part of a policy aimed at mitigating greenhouse gas emissions, preventing carbon leakage, and preserving a stable climate.

As with the rate equivalency carbon BTA, H.R. 2202 aims at a vital and important value shared by the community of nations. Like the rate equivalency carbon BTA, this policy places *de minimis* restrictions on trade. Indeed, because imported products need not be stamped with their embedded emissions, it might be less trade restrictive. However, the bill does not specify a method for calculating the pass through cost of the carbon tax. This calculation seems to be only required of domestic product, but the details of that method might end up burdening trade to at least the same degree as the performance of a GHG LCA.

However, under the price equivalency carbon BTA the incentives with respect to carbon leakage and mitigation seem to be completely misaligned with the stated policy goal. First, the price equivalency carbon BTA gives neither low carbon importers nor high carbon importers incentives to further mitigate their emissions. The embedded emissions of both of their “like” products are implicitly benchmarked against the embedded emissions of the “like” U.S. product. As such, they have no control over the rate at which their imported products are taxed by the carbon BTA and, therefore, no incentive to mitigate.

Second, under the price equivalency carbon BTA importers with embedded emissions higher than a “like” domestic product are subjected to a lower rate of taxation per metric ton of CO₂ than producers of “like” domestic products. *Ceteris paribus*, domestic producers have reason to migrate to jurisdictions with weak restraints to greenhouse gas emissions, and, to invite them in, jurisdictions have incentive to *532 develop such laxity. While GATT panels and the AB have been deferential to Members’ use of different policy mechanism for achieving their desired end, the misalignment between policy goal and policy mechanism seems too large to be permitted.

Further, assuming that the panel does conclude that there is a match between the stated policy goals of mitigation and prevention of carbon leakage, a country challenging the price equivalency carbon BTA would need to proffer alternatives to the challenged policy which meet the respondent Members policy goals while being no more restrictive.¹⁴⁵ The challenging Member could suggest a rate equivalency carbon BTA. Because this requires a GHG LCA, the panel might find this to be more trade restrictive than a price equivalency carbon BTA, but it is also likely to find that it matches better with the goals of mitigation and prevention of carbon leakage.

Finally, under an Article XX(g) defense, the respondent would have to show that the price equivalency carbon BTA relates to the conservation of an exhaustible natural resource and that the measure was made effective in conjunction with a restriction on domestic production or consumption.¹⁴⁶ As with the proposed carbon BTA, the U.S. will likely be able to show that the policy aims at the conservation of an exhaustible natural resource (stable climate) and was made effective in conjunction with restriction on domestic production and consumption. A panel might be concerned, however, as to whether the BTA “relates to” the policy objective of mitigating greenhouse gas emissions, preventing leakage, and preserving a stable climate. The same concerns discussed above about the misalignment of the tax rates with the incentive to mitigate and to prevent leakage seem to militate against finding such a relation.

XI. Conclusion

While concluding the final edits of this paper, the twenty-first Conference of the Parties under the UNFCCC adopted the Paris Agreement.¹⁴⁷ The Paris Agreement includes provisions on capacity-building, technology development and transfer,

finance, loss and damage, and adaptation. As for mitigation, the subject of this study, the Paris Agreement retains a 2C target while urging nations “to pursue efforts to limit the temperature increase to 1.5C above pre-industrial levels.”¹⁴⁸ The Paris Agreement also institutes a mechanism under which nations are to ratchet up their successive *533 intended nationally determined contribution (INDCs), as the compilation of INDCs hitherto submitted falls well short of the 2C target, much less a 1.5C target. Article 4:2 says that “[e]ach party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures with the aim of achieving the objectives of such contribution.”¹⁴⁹ Further, “[e]ach Party’s successive nationally determined contribution will represent a progression beyond the Party’s then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibility and respective capabilities, in the light of different national circumstances.”¹⁵⁰

The United State’s INDC is founded solely upon administrative actions made available under existing statutory law.¹⁵¹ The recently promulgated final Clean Power Plan (CPP) is the most prominent element of the U.S.’s INDC. It requires states to submit a state implementation plan (SIPs) which will achieve the statewide greenhouse gas reductions set out in the CPP. At last count, twenty-seven states had filed suit challenging the CPP.¹⁵² The CPP is likely to survive these challenges, but nonetheless has severe limitations as a mitigation measure. First, unlike a Pigouvian carbon tax, the CPP generates no revenue and therefore has only a limited ability to create a domestic climate coalition. Second, greenhouse mitigation along a trajectory sufficient to hold global average temperatures below 2C requires extensive alterations to the submerged state, some features of which were mentioned but not elaborated upon in the paper. In their SIPs, some states might make the necessary revisions, but some of these revisions can only be accomplished at the national level. Third, the Clean Power Plan allows the United States to engage the international community in only a limited way, solely through the executive branch. Sufficient mitigation, as well as adaptation and every other aspect of climate policy, requires Congressional engagement.

The Paris Agreement requires Parties “to communicate a nationally determined contribution every five years”¹⁵³ and allows a Party “at any time [to] adjust its existing nationally determined contribution with a view to enhancing its level of ambition.”¹⁵⁴ This paper has set forth one option by which the Congress may more *534 fully engage the community of nations as humanity decarbonizes its economic activity and builds out a resilient, equitable, and inclusive clean energy economy.

Footnotes

^{a1} Dr. Ross Astoria is a professor at the University of Wisconsin at Parkside. He teaches courses in public law and policy, legal studies, and political philosophy. His major research concern is greenhouse gas mitigation policy. Professor Astoria may be reached at astoria@uwp.edu.

¹ See, e.g., KATERYNA HOLZER, CARBON-RELATED BORDER ADJUSTMENT AND WTO LAW 99-103 (Edward Elgar Pub. Inc., 2014); GARY CLYDE HUFBAUER, STEVE CHARNOVITZ, JISUN KIM, GLOBAL WARMING AND THE WORLD TRADING SYSTEM 39-46 (Peterson Institute for Int’l Econ., 2009); DANIEL GROS & CHRISTIAN EGENHOFER, CLIMATE CHANGE AND TRADE: TAXING CARBON AT THE BORDER? 39-65 (Ctr. for Eur. Pol. Stud., 2010); JOOST PAUWELYN, *Carbon Leakage Measures and Border Tax Adjustments under WTO Law*, in RESEARCH HANDBOOK ON ENVIRONMENT, HEALTH, AND THE WTO 448-506, 474-480 (Geert Van Calster & Denise Prevoost eds., 2013); Keith Kendall, *Carbon Taxes and the WTO: A Carbon Charge Without Trade Concerns?* 29 ARIZ. J. INT’L & COMP LAW 49 (2012); Charles Benoit, *Picking Tariff Winners: Non-Product Related PPMs and DSB Interpretations of “Unconditionally” within Article I:1*, 42 GEO. J. INT’L L. 583 (2011) (arguing that that a tariff preference for low carbon fuels would be treaty compliant).

² Pauwelyn, *supra* note 1, at 506.

³ SHI-LING HSU, A CASE FOR THE CARBON TAX: GETTING PAST OUR HANG-UPS TO EFFECTIVE CLIMATE POLICY (2011); See generally, IMPLEMENTING A U.S. CARBON TAX: CHALLENGES AND DEBATES (Ian Parry, Adele Morris, & Roberton C. Williams III eds., 2015).

⁴ Most likely, for coal, this is at the completion of beneficiation; for natural gas, it is exit from the processing; for petroleum, this is the refinery. See, Jack Calder, *Administration of a U.S. Carbon Tax* (Chapter 3), in IMPLEMENTING A CARBON TAX:

CHALLENGES AND DEBATES (Ian Parry et al. eds., 2015); Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499, 523 (2009); Ross Astoria, *The Export Clause and the Constitutionality of a National Cap and Trade CO2 Mitigation Policy*, 26 GEO. INT'L. ENVTL. L. REV. 117 (2014).

5 Cal. Code Regs. tit. 17, §§95480-90.

6 Ottmar Edenhofer et al., IPCC 2014: Summary for Policymakers, in *Climate Change 2014: Mitigation of Climate Change* 10-17, at <http://mitigation2014.org/report/summary-for-policymakers>.

7 SUZANNE METZLER, *THE SUBMERGED STATE: HOW INVISIBLE GOVERNMENT POLICIES UNDERMINE AMERICAN DEMOCRACY* (University of Chicago Press, 2011).

8 *See* Elec. Power Supply Ass'n v. FERC, 753 F.3d 216 (D.C. Cir. 2014).

9 *See* THE CALIFORNIA PUBLIC UTILITY COMMISSION, <http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/Zero+Net+Energy+Buildings.htm>.

10 *See* SCOTT HEMPLING, *REGULATING PUBLIC UTILITY PERFORMANCE: THE LAW OF MARKET STRUCTURE, PRICING, AND JURISDICTION*, 96 (ABA Section of Environment, Energy, and Resources, 2013) (describing how the Oklahoma and Wyoming legislatures have altered the eminent domain law so as to restrict access to wind producers).

11 *See Factsheet Series on Financing Clean Energy Projects*, National Renewable Energy Laboratory, <http://www.nrel.gov/docs/fy10osti/47097.pdf>.

12 *See Reforming the Energy Vision*, New York Public Service Commission, <http://www3.dps.ny.gov/W/PSCWeb.nsf/All/CC4F2EFA3A23551585257DEA007DCFE2?OpenDocument>.

13 Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), Second Session, part eight, at 1, FCCC/ADP/2015/2, http://unfccc.int/files/bodies/awg/application/pdf/negotiating_text_12022015@2200.pdf.

14 PETER BARNES, *WITH LIBERTY AND DIVIDENDS FOR ALL* (Berrett-Koehler Publishers, 2014). *See generally*, Ian Parry et al., *supra* note 4.

15 *See* HUFBAUER, CHARNOVITZ, & KIM, *supra* note 1 at 61-64.

16 40 C.F.R. § 98 (2009).

17 *See, e.g.*, the Tax Pollution, Not Profits Act of 2015, H.R. 2202, 114th Cong. (2015), the Healthy Climate and Family Security Act of 2015, H.R. 1027, 114th Cong. (2015), and the American Opportunity and Carbon Fee Act, S. 1548, 114th Cong. (2015).

18 *See* Ian Parry et al., *supra* note 4, at 11-12.

19 *See, e.g.*, DANIEL GROS & CHRISTIAN EGENHOFER, *supra* note 1, at 61-62.

20 Healthy Climate and Family Security Act of 2015, H.R. 1027, 114th Cong. § 9922 (2015).

21 *Id.*

22 *See, e.g.,* Tax Pollution, Not Profits Act, H.R. 2202, 114th Cong. § 4692 (2015).

23 THE EFFECTS OF H.R. 2454 ON INTERNATIONAL COMPETITIVENESS AND EMISSION LEAKAGE IN
ENERGY-INTENSIVE TRADE-EXPOSED INDUSTRIES: AN INTERAGENCY REPORT RESPONDING TO A REQUEST
FROM SENATORS BAYH, SPECTER, STABENOW, MCCASKILL, AND BROWN,
http://www.epa.gov/climatechange/Downloads/EPAactivities/InteragencyReport_Competitiveness-EmissionLeakage.pdf.

24 *See* HUFBAUER, CHARNOVITZ, & KIM, *supra* note 1, at 69 (“[T]he rebate on an energy tax for exports could undermine the
Article XX environmental justification for applying the BTA to imports.”).

25 *Id.* at 69.

26 Aaron Cosby et al., *A Guide for the Concerned: Guidance on the elaboration and implementation of border carbon adjustments*,
ENTWINED POL. REPORT 03, (Nov. 2012)
<http://www.iisd.org/publications/guide-concerned-guidance-elaboration-and-implementation-border-carbon-adjustment>.

27 *See* HOLZER, *supra* note 1, 140-145

28 Appellate Body Report, *United States--Measures concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶¶
194-95, WTO Doc. WT/DS381/AB/R (June 12, 2012). [hereinafter ABR, *US--Tuna/Dolphin II*]

29 *See* Appellate Body Report, *European Communities-- Measures Prohibiting the Importation and Marketing of Seal Products*, ¶
4.5, WT/DS400/AB/R, WT/DS401/AB/R (May 22, 2014) (adopted June 17, 2014). [hereinafter *EC--Seal Products*]

30 General Agreement on Tariffs and Trade, Article I:1, Oct. 30, 1947, 55 U.N.T.S. 196 [hereinafter GATT].

31 GATT Art. III:2.

32 *Id.*

33 GATT Art. III:4.

34 Agreement on Technical Barriers to Trade, Art. 2.1 (“Members shall ensure that in respect of technical regulations, products
imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of
national origin and to like products originating in any other country.”) [hereinafter TBT]

35 *See* CHRISTINE R. CONRAD, PROCESS AND PRODUCTION METHODS (PPMS) IN WTO LAW: INTERFACING TRADE
AND SOCIAL GOALS, 162-203.

36 Appellate Body Report, *EC--Measures Affecting Asbestos and Asbestos-Containing Products* ¶ 102 WTO Doc. WT/DS135/AB/R
(adopted Apr. 4, 2001) [hereinafter *EC--Asbestos*].

37 Appellate Body Report, *Japan--Taxes on Alcoholic Beverages*, 23 WTO Doc. WT/DS8/AB/R (adopted Nov. 1, 1996) [hereinafter
Japan--Alcoholic Beverages].

38 Panel Report, *United States--Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, ¶ 7.407, WTO Doc. WT/DS381/RW (April 14, 2015) [hereinafter Panel Report, *US--Tuna/Dolphin II*].

39 Appellate Body Report, *United States--Measures Affecting the Production and Sale of Clove Cigarettes*, ¶ 120, WTO Doc. WT/DS406/AB/R (adopted April 23, 2012) [hereinafter *US-- Clove Cigarettes*].

40 *EC--Asbestos*, *supra* note 37, ¶ 101.

41 Conrad, *supra* note 36, at 174-179.

42 *See id.*, at 28.

43 HOLZER, *supra* note 1, at 110-115.

44 *Id.* at 113-114.

45 *EC--Asbestos*, *supra* note 37, at ¶ 113.

46 Panel Report, *United States--Taxes on Automobiles*, ¶ 2.1-2.24, WTO Doc. DS31/R (Oct. 11, 1994).

47 *Id.* at ¶ 3.37-3.78.

48 Conrad, *supra* note 41, at 214-15.

49 Panel Report, *United States--Taxes on Petroleum and Certain Imported Substances*, ¶ 2.1-2.6, WTO Doc. L/6175-- 34S/136 (adopted Jun. 17, 1987) [hereinafter *US--Superfund*].

50 *Id.* at ¶ 2.5.

51 *Id.* at ¶ 5.2.8.

52 HOLZER, *supra* note 1, at 108; PAUWELYN, *supra* note 1, at 478-79.

53 JOOST PAUWELYN, *U.S. Federal Climate Policy and Competitiveness Concerns: the Limits and Options of International Trade Law*, 28 (Nicholas Institute for Environmental Policy Solutions Working Paper, 2007), available at <https://nicholasinstitute.duke.edu/sites/default/files/publications/u.s.-federal-climate-policy-and-competitiveness-concerns-the-limit-s-and-options-of-international-trade-lawpaper.pdf>.

54 PAUWELYN, *supra* note 1, at 479-80.

55 HOLZER, *supra* note 1, at 108.

56 Appellate Body Report, *European Community--Measures Prohibiting the Importation and Marketing of Seal Products*, ¶ 5.88,

WTO Doc. WT/DS400/AB/R, WT/DS401/AB/R (adopted June 14, 2014) [hereinafter *EC--Seal Products*].

57 *See generally* DAVID VICTOR, *GLOBAL WARMING GRIDLOCK: CREATING MORE EFFECTIVE STRATEGIES FOR PROTECTING THE PLANET* (Cambridge University Press, 2011).

58 *Id.*

59 Decision of 28 November 1979, L/4903, GATT, 26th Supp. BISD 203 (1980) (“Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries”) (“Notwithstanding the provisions of Article I of the General Agreement, contracting parties may accord differential and more favourable treatment to developing countries(1), without according such treatment to other contracting parties.”).

60 United Nations Framework Convention on Climate Change, May 9 1992, FCCC/Informal/84.

61 Appellate Body Report, *United States--Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 165, WTO Doc. WT/DS58/AB/R (adopted Nov. 6, 1998) [hereinafter *US-- Shrimp/Turtles*].

62 *EC--Seal Products supra* note 57, ¶ 4.5.

63 *Id.* at ¶ 5.130.

64 Panel Report, *European Communities--Measures Prohibiting the Importation and Marketing of Seal Products*, ¶ 7.597, WTO Doc. WT/DS400/R, WT/DS401/R (Nov. 25, 2013) [hereinafter Panel Report *EC--Seal Products*].

65 *But see* Appellate Body Report, *Dominican Republic-- Measures Affecting the Importation and Internal Sale of Cigarettes*, ¶ 96, WTO Doc. WT/DS302/AB/R (adopted May 18, 2005) (in which the panel identifies “market share” as a factor which might explain a detrimental impact, but without then asking if market share was conditioned by the cigarettes’ foreign origin.) [hereinafter *Dominican Republic--Cigarettes*].

66 Panel Report, *EC--Seal Products, supra* note 57, ¶ 7.572. (Nov. 25, 2013). (“It is thus clear that there were some delays of varying length in the exchanges between the Commission and the respective applicant bodies in Sweden and Greenland.”).

67 *Id.* at ¶ 7.580 (“Therefore, in spite of our concern expressed above regarding the time take with respect to Swedish applications, we have not been provided a sufficient basis to conclude that the CAP was not undertaken and completed as expeditiously as possible within the meaning of Article 5.2.1 of the TBT Agreement.”).

68 *Id.* at ¶ 7.599.

69 GATT Art. III:2

70 *Japan--Alcoholic Beverages* at 23.

71 *See* PAUWELYN, *supra* note 1, at 479-480.

72 Report of the Working Party on Border Tax Adjustments, L/3464 adopted on December 2, 1970, ¶ 14.

73 *Id.* at ¶ 15.

74 *Id.* at ¶ 15.

75 HUFBAUER, CHARNOVITZ, & KIM, *supra* note 1, at 69-70.

76 Bipartisan Cong. Trade Priorities and Accountability Act of 2015, 19 U.S.C.A §§4201-4210 (2015).

77 Trade in Service Agreement, Core Text, 4 (Apr. 2015) <https://wikileaks.org/tisa/core/> (last visited Nov. 10, 2015).

78 Art. III:2.

79 *Japan--Alcoholic Beverages*, at 23-24.

80 *Id.* at 25.

81 *Korea--Alcoholic Beverages*, at ¶ 134.

82 *Japan--Alcoholic Beverages*, at 23.

83 Appellate Body Report, *Korea--Various Measures on Beef*, ¶ 133 WTO Doc. WT/DS161/AB/R WT/DS169/AB/R (adopted Jan. 9, 2001) [hereinafter *Korea-- Beef*].

84 Panel Report, *US--Tuna/Dolphin*, ¶ 7.474.

85 *US--Clove Cigarettes*, at ¶ 180.

86 Joshua Meltzer & Amelia Porges, *Beyond Discrimination? The WTO Parses the TBT Agreement in US--Clove Cigarettes, US--Tuna II (Mexico), and US--COOL*, 14 MELBOURNE J. OF INT'L L. 1, 16- (2014), <http://www.law.unimelb.edu.au/files/dmfile/11MeltzerPorges-Depaginated.pdf>.

87 *Dominican Republic--Cigarettes*, at ¶ 96.

88 Appellate Body Report, *Thailand--Customs and Fiscal Measures on Cigarettes from the Philippines*, ¶ 134, WTO Doc WT/DS371/AB/R (adopted July 14, 2011) [hereinafter *Thailand--Cigarettes*].

89 *US--Clove Cigarettes*, at FN 372.

90 Meltzer and Porges, *supra* note 88, at 11.

91 *EC--Seal Products*, *supra* note 30, ¶ 2.181.

92 See e.g., *Thailand--Cigarettes*, *supra* note 90, ¶ 130.

93 Meltzer and Porges, *supra* note 88, at 15.

94 Steve Charnovitz, *The Law of Environmental “PPMS” in the WTO: Debunking The Myth of Illegality*, 27 YALE J. INT’L L. 59, 79-83 (2002).

95 GATT Art. XX(b).

96 *Korea - Beef*, at ¶ 161.

97 *Id.* at ¶ 164.

98 *Id.*

99 Appellate Body Report, *Brazil--Measures Affecting Imports of Retreaded Tyres*, ¶ 144, WTO Doc. WT/DS332/AB/R (adopted Dec. 16, 2007) [hereinafter *Brazil--Tyres*].

100 *Id.* at ¶ 172.

101 *Id.* at ¶ 144.

102 *Id.*

103 *Id.* at ¶ 155.

104 *Id.* at ¶ 172.

105 *Id.* at ¶ 150; *US--Shrimp/Turtles* at ¶ 3.

106 *Brazil - Tyres*, at ¶ 145.

107 GATT Art. XX(g).

108 Appellate Body Report, *United States--Standards for Reformulated and Conventional Gasoline*, ¶¶ 20, 21, WTO Doc. WT/DS2/AB/R (adopted May 20, 1996) [hereinafter *US-- Gasoline*]. See also HOLZER, *supra* note 1, at p. 156.

109 HOLZER, *supra* note 1, at 156 (citing PAUWELYN, *supra* note 60, at 36).

110 Appellate Body Report, *United States - Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 130, WTO Doc. AT/DS/58/AB/R (adopted Nov. 20, 2001) [hereinafter *US-- Shrimp/Turtles*].

111 *US--Shrimp/Turtles*, at ¶¶ 132-134 and *US-- Gasoline*, at ¶ 6.37.

112 See *US--Shrimp/Turtles*, at ¶ 132 (citing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)).

113 HOLZER, *supra* note 1, at 155.

114 *US--Shrimp/Turtles*, at ¶ 135.

115 *Id.* at ¶ 138.

116 Chapeau, GATT Art. XX.

117 *US--Gasoline*, at 23.

118 *EC--Seal Products*, at ¶¶ 5.84--5.96.

119 *EC--Seal Products*, at ¶ 5.306.

120 *EC--Seal Products*, at ¶ 5.305, paraphrasing the Report of the Appellate Body in *US--Shrimp/Turtle*.

121 *See e.g.*, Kevin Dempsey, *The Intersection of Climate Change Policy and International Trade Law: Potential Conflicts and Solutions*, September 2009 ASPATORE 1, 18 (2009 WL 2974774).

122 TBT, Annex 1.1.

123 Appellate Body Report, *European Communities--Trade Description of Sardines*, ¶ 176, WTO Doc. WT/DS315/AB/R (adopted Oct. 22, 2002).

124 ABR, *US--Tuna/Dolphins II*, at ¶¶ 194-95.

125 *EC--Seal Products*, at ¶¶ 5.8-5.15.

126 *But cf.* CONRAD, *supra* note 4, at 147.

127 *US--Tuna/Dolphin* at ¶ 5.12.

128 Appellate Body Report, *European Communities--Measures Prohibiting the Importation and Marketing of Seal Products*, ¶ 5.11, WT/DS400/AB/R, WT/DS401/AB/R (May 22, 2014) (adopted June 14, 2014).

129 *Id.* at ¶ 5.13.

130 *Id.* at ¶ 5.14.

131 *Id.* at ¶ 5.12.

132 *Id.* at ¶ 5.45.

133 TBT, Art. 2.1.

134 *US--Clove Cigarettes*, at ¶ 180.

135 *Id.* at ¶ 181.

136 *Id.* at ¶ 96.

137 *EC--Seal Products*, at ¶ 5.97--5.130.

138 H.R. 2202, 114th Congress (2015). *See also* the Healthy Climate and Family Security Act, H.R. 5271, 114th Cong. (2015).

139 H.R. 2202. § 4691(a).

140 H.R. 2202. § 4691(b).

141 H.R. 2202, 114th Cong., § 4692(a) (2015).

142 H.R. 2202, 114th Cong., §4691(b) (2015).

143 GATT Art. I:1.

144 GATT Art. XX(b).

145 *EC--Asbestos*, *supra* note 37, ¶¶ 5.260--5.264.

146 GATT Art. XX(g).

147 FCCC/CP/2015/L.9/Rev.1 [hereinafter "Paris Agreement"] <http://unfccc.int/resource/docs/2015/cop21/eng/109.pdf>.

148 Paris Agreement, Art. 2:1(a).

149 Paris Agreement, Art. 4:2.

150 Paris Agreement, Art. 4:3.

151 THE UNITED STATES INDC
<http://www4.unfccc.int/submissions/INDC/Published%20Documents/United%20States%20of%20America/1/U.S.%20Cover%20Note%20INDC%20and%20Accompanying%20Information.pdf>.

152 Megan Herzog, *Clean Power Plan Litigation Kick-Off*, LEGAL PLANET (Oct. 28, 2015), <http://legalplanet.org/2015/10/28/clean-power-plan-litigation-kick-off/>

¹⁵³ Paris Agreement, Art. 4:9.ff

¹⁵⁴ Paris Agreement, Art. 4:11.