Environmental Challenges and Opportunities of the Evolving North American Electricity Market
Secretariat Report to Council under Article 13 of the North American Agreement on Environmental Cooperation

4

Background Paper

NAFTA Provisions and the Electricity Sector

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NAFTA PROVISIONS AND THE ELECTRICITY SECTOR

This background paper identifies some of the key provisions in the North American Free Trade Agreement (NAFTA) of relevance to trade in electricity.[1] In discussing NAFTA provisions, the purpose of the Background Paper is neither to interpret NAFTA rules—a competence that rests with NAFTA Parties and dispute settlement panels—nor to envision probable environment-related trade disputes in which NAFTA rules may apply. Rather, there are three objectives of this Paper:

(a) To identify and examine NAFTA rules of relevance to electricity trade. In addition to overarching obligations contained in NAFTA related to national treatment, tariff reduction and/or elimination for goods, market access commitments, rules governing trade in services and other provisions, NAFTA contains obligations of specific applicability to trade in electricity. These are primarily set out in NAFTA Chapter Six: Energy and Basic Petrochemicals. This paper examines in some detail key provisions contained in that Chapter.

(b) To examine the possible relationship between NAFTA rules and environmental regulations or standards related to the electricity sector. The example of Renewable Portfolio Standards applied at the sub-federal level in several US states, and their possible relationship to NAFTA rules, is discussed.

(c) To examine generally the relationship between NAFTA Chapter Eleven: Investment provisions and their possible relationship with environmental regulations and standards.

SECTION ONE

Trade and Environment and the North American Agreement on Environmental Cooperation

The discussion which follows concerning the relationship between NAFTA rules covering trade in electricity in North America, and their possible relationship with environmental measures, is undertaken pursuant to the functions of the Council of the Commission of Environmental Cooperation. For example, Article 10(6) of the North American Agreement on Environmental Cooperation—commonly referred to as the NAFTA environmental side-agreement—states that:

> 6. The Council shall cooperate with the NAFTA Free Trade Commission to achieve the environmental goals and objectives of the NAFTA by:
>
> (a) acting as a point of inquiry and receipt for comments from nongovernmental organizations and persons concerning those goals and objectives;
>
> (b) providing assistance in consultations under Article 1114 of the NAFTA where a Party considers that another Party is waiving or derogating from, or offering to waive or otherwise derogate from, and environmental measure as an encouragement to establish, acquire, expand or retain an investment of an investor, with a view to avoiding any such encouragement;
>
> (c) contributing to the prevention or resolution of environment-related trade disputes by:

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(i) seeking to avoid disputes between the Parties;

(ii) making recommendations to the Free Trade Commission with respect to the avoidance of such disputes, and

(iii) identifying experts able to provide information or technical advice to NAFTA committees, working groups other NAFTA bodies,[2]

(d) considering on an ongoing basis the environmental effects of the NAFTA; and

(e) otherwise assisting the Free Trade Commission in environment-related matters.[3]

The NAAEC 10(6) provisions noted above emphasize both dispute settlement and the avoidance of environment-related trade disputes. It is important to note that there have thus far been no NAFTA disputes involving environmental measures applied in the electricity sector. At the same time, given the probable growth in electricity trade in North America, coupled with the extent to which electric power generation is subject to extensive and differing environmental regulations and standards among different North American jurisdictions, it is prudent to anticipate the extent to which disputes *may* arise in the future.

NAFTA Chapter Six: Energy and Basic Petrochemicals

NAFTA Chapter Six sets out specific liberalization commitments for the energy sector, of which electricity is a sub-sector. The Scope and Coverage of Chapter Six applies both to trade in energy goods as well as to "measures relating to investment and the cross-border trade in services associated with such goods." The Chapter notes (Article 601) that

> "it is desirable to strengthen the important role that trade in energy and basic petrochemical goods plays in the free trade area and to enhance this role through sustained and gradual liberalization".

The Scope and Coverage of NAFTA Chapter Six applies to "measures relating to energy and basic petrochemical goods originating in the territories of the Parties and to measures relating to investment and to the cross-border trade in services associated with such goods, as set forth in this Chapter." (Article 602(a))

Under the Harmonized System Electrical Energy is classified as 2716.00.00. The staging category of HS 2716.00.00 for Canada and the US is "D" (shall continue to receive duty-free treatment), with a free base rate. Mexico's schedule for 2716.00.00 is staging category B, with a 10 percent duty phased-out by 1998.[4]

Coverage of Electrical Energy under the WTO and NAFTA

Three main activities are generally recognized as comprising the electricity sector: (a) electric power generation, involving the conversion of primary energy (fossil fuels such as coal, oil and natural gas)

[2] See Annex One for a listing of the current NAFTA Working Groups and Committees. These groups and committees are comprised of government officials from Canada, Mexico and the United States. The Council of the CEC has no formal and ongoing links with any of the approximately 30 NAFTA working groups or committees.
[3] North American Agreement on Environmental Cooperation between the Government of Canada, the Government of the United Mexican States and the Government of the United States of America.
[4] See Annex Two for a listing of tariff levels associated with electricity generation and trade in the three NAFTA countries.

into electrical energy (or secondary electricity);[5] (b) the transmission of electricity, which refers to the transportation of electricity from generators to distribution companies and large final consumers (industry) through high voltage mains (grids); and (c) the distribution of electricity, including the selling and delivery of electricity to end-users (including residential consumers) through low voltage mains.

Electricity is intangible, a quality that has traditionally been used as a characteristic for the classification of items as services. Furthermore, electricity cannot be efficiently stored and must be consumed as it is produced, yet another characteristic of a service.[6] As noted above, while the Harmonized Commodity Description and Coding System (HS) classifies electricity as a commodity, it is an optional heading (unlike other energy goods), so that members of the World Customs Organization are not required to classify it as a commodity for tariff purposes. The difficulty in defining electricity across-the-board by all countries as a good may reflect the fact that, traditionally, the energy industry in many WTO member countries did not distinguish between goods and services activities, reflecting the vertically integrated, monopolistic nature of the sector.

An important question regarding the relationship between trade rules and the electricity sector involves the definition of electricity as a good or service. In general, the multilateral debate regarding the definition and coverage of energy appears to be leading to the general recognition that within the existing WTO framework, the generation of electricity falls under the scope of the goods agreement, while the transmission, distribution and related services fall under the scope of the General Agreement on Trade in Services (GATS) of the WTO Agreement.

However, the precise definition of goods versus services as they pertain to the electricity sector has yet to be determined. A key question is whether electric power generation constitutes a service or a manufacturing process. This definitional classification is important, since the treatment of electric power in an international trade dispute—under either the WTO or NAFTA dispute settlement provisions—would differ depending on the classification of electricity as either a good or a service. At the multilateral level, some ambiguity persists regarding the coverage of all aspects of electricity generation and related activities. This ambiguity concerns the different and distinct stages that comprise the electricity sector. On the other hand, most power plants materially transform energy in various sources such as coal, gas or oil into electrical energy.[7] Such material transformation is typical for the manufacturing process.

A recent study by the United States International Trade Commission (USITC) which was initiated at the request of the United States Trade Representative (USTR), defines the core areas of the electric power industry as services, including not only the distribution of electricity as a service but also the generation of electric power.[8] Transmission and distribution are also generally regarded as a service in the

[5] An interesting question also arises to as whether the generation of primary electricity through hydropower, nuclear or wind power is distinct from secondary electricity from a classification perspective.

[6] For example, with respect to GATT Article XX(g) of the Agreement, the general exception relating to the conservation of exhaustible resources, the New York Drafting Committee Report noted that "as it seemed to be generally accepted that electric power should not be classified as a commodity, two delegates did not find it necessary to reserve the right for their countries to prohibit the export of electric power." See GATT Analytical Index: Guide to GATT Law and Practice, Updated 6th Edition, 1995.

[7] It can also be argued, however, that the element of material transformation is lacking in the production of hydroelectricity, see J. Owen Saunders, *GATT, NAFTA and North American Energy Trade: A Canadian Perspective*, Journal of Energy & Natural Resources Law, vol. 12, no. 1, p. 5.

[8] Regarding ongoing GATS negotiations, six WTO members, including Canada and the United States, have thus far tabled proposals on energy services. In its proposal, the US states that "Energy services are those services involved in the exploration, development, extraction, production, generation, transportation, transmission, distribution, marketing, consumption, management and efficiency of energy, energy products and fuels." (WTO

multilateral context, and therefore would be subject to GATS rules if transmission and distribution services are provided independently of generation.

Nevertheless, for this study it will be assumed that electricity is considered to be a good. Evidence that electricity is covered by the GATT and that electricity as such is considered a good by many WTO Members can be found in the fact that it is included in the Schedule of Commitments to the GATT 1994 of most of the major trading partners (e.g., the US, the EU and Canada, however, it is not included in Japan's and Mexico's schedules). Those schedules contain WTO Members' tariff commitments for specific listed goods. The GATS currently has some bearing for services related to electricity, this application is, however, only limited. As an example, the United States' GATS schedule currently includes only "services incidental to energy distribution" which is included in the sector of "other business services."[9]

The fact that electricity would be considered as a good under current trade rules is further supported by the treatment of electrical energy under NAFTA. Chapter 6 of NAFTA deals with Energy and Basic Petrochemicals and falls under Part Two of the NAFTA: Trade in Goods. Article 602 on scope and coverage provides in its third paragraph that energy and petrochemical goods and activities are governed by the provisions of NAFTA. The first paragraph of the same Article specifies that Chapter 6 "…applies to measures relating to energy and basic petrochemical goods originating in the territory of the parties and to measures relating to investment and to the cross-border trade in services associated with such goods…" The specific goods subject to the provision are listed in paragraph 2 and include, *inter alia*, electrical energy by reference to its classification under Chapter 27.16 of the Harmonized System.[10]

Communications of the United States of America, Energy Services, S/CSS/W/24, 18 December 2000) The US proposal includes an "index for Classification of Energy Services" which would incorporate all energy services and energy-related service activities provided for within the WTO Services Sectoral Classification List (MTN.GNS/W/120), as well as those energy activities identified as not falling as yet within the GATS. The US has also submitted a proposal in the framework of the classification work ongoing in the WTO Committee on Specific Commitments, in which it advocates a comprehensive classification of energy services covering the entire chain of activities involved in the energy sector, to serve as a model schedule that would enable WTO Members to undertake commitments across the sector. (WTO, Committee on Specific Commitments, Communications from the United States of America. Classification of Services, S/CS/W/27, 18 May, 2000. The purpose behind proposing such a comprehensive classification would seem to be to expand not only cross border trade *per se*, but also cross-border investment in energy related goods and services. To further develop this argument, see UNCTAD, "Energy Services in International Trade: Development Implications," Note by the Secretariat, TD/B/COM.1/EM.16/2, 18 June 2001.)

The proposal by Canada to the WTO is limited to oil and gas, and suggests that the current classification has certain merit, and that services related to the sector could still be subject to a special "cluster" or "checklist" that Members may use as an *aide memoire* during negotiations. (WTO, Communication from Canada, Initial Negotiating Proposal on Oil and Gas Services, S/CSS/W/58, 14 March 2001.)

[9] The United States of America, Schedule of Specific Commitments, GATS/SC/90, 15 April 1994. According to the explanatory note of this entry contained in the United Nations Provisional Central product Classification, "services incidental to energy distribution" includes transmission and distribution of electricity and gas, when these services are operated by an independent services supplier and not by a vertically integrated supplier. Furthermore, UNCPC Rev. 1 (1997) includes a number of energy services entries, including "electricity distribution services." (The UNCPC has served as a basis for GATS negotiations and for the elaboration of the WTO "Services Sectoral Classification List" (MTN.GNS/W/120).

[10] See Article 602 paragraph 2(h).

The legal regime for electricity imports under NAFTA

General Requirements Concerning National Treatment and Tariff Elimination for all goods

Electricity in its quality as a good under Chapter Six of the NAFTA is subject to the provisions of NAFTA Chapter Three on national treatment and market access for goods. As a result, trade in electrical energy benefits from national treatment under Article 301 and tariff elimination under Article 302 (to the extent that they originate from Canada, the US or Mexico). The national treatment requirement as provided in Article 301 of the NAFTA stipulates that "Each Party shall accord national treatment to the goods of another Party in accordance with Article III of the General Agreement on Tariffs and Trade (GATT), including its interpretative notes."

The Legal Regime Specific to Energy and Basic Petrochemicals

By Article 603(1), the NAFTA parties incorporate the GATT provisions on prohibitions or restrictions on trade in energy and petrochemicals, thereby generally affirming the application of GATT-type obligations within NAFTA.[11] Within the same provision, the parties note the importance of the GATT prohibition of quantitative restrictions, including the application of minimum or maximum export-price or import-price requirements.[12] Under Article 604 duties, taxes or other charges on exports of energy (or petrochemical goods) to the territory of another party are only permissive when imposed on exports to all parties equally and when the same duty, tax or charge is applied to such good when consumed domestically. Parties are allowed, however, to apply trade restrictions on energy when such energy, "although traded with another NAFTA party, originates from or has as final destination the territory of a non-party against which the party maintains the trade restrictions."[13] Thus, theoretically imports of non-party electricity coming from the territory of a NAFTA Party can be limited or prohibited.

Furthermore, a condition can be imposed on the exportation of a good, e.g., electricity, requiring it to be consumed within the territory of a party (that is, not shipped through a party for consumption in a third party).

Article 603(5) allows the parties to maintain systems of import and export licensing for energy (and basic petrochemical goods), provided that they are operated in a manner consistent with the Agreement.

Parties may maintain export restrictions on energy products under certain conditions. First, the application of measures restricting exports is limited to the circumstances set out under Article XI:2(a) of the GATT 1994, which allows for temporary application of export prohibitions or restrictions to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting party. Moreover, export restrictions are allowed in principle in the NAFTA, if they are justified under GATT Article XX (g)(i) or (j).

Second, NAFTA establishes further prerequisites listed in Article 605 (a) to (c) that must prevail cumulatively and as a consequence of which parties may not impose export restrictions if they reduce the proportion of the total supply made available to the other NAFTA Parties below the level of the preceding three years or other agreed period; impose a higher price on exports to another NAFTA country than on domestic sales and disrupt normal supply channels or alter the normal mix of energy products. Article 605 only applies between the US and Canada. Mexico has entered reservation in Annex 605 to the effect that the limitations on the use of export restrictions shall not apply between Mexico and the other NAFTA Parties.

[11] Restrictions are defined by Article 609 as "…any limitation, whether made effective through quotas, licenses, permits, minimum or maximum price requirements or any other means."
[12] Article 603 paragraph 2 NAFTA. See also Article XI paragraph 1 of the GATT 1994.
[13] Article 603 paragraph 3 NAFTA.

Finally, pursuant to Article 607, a Party may restrict imports or exports of energy or basic petrochemical goods for reasons of national security in certain stated situations, such as supply a military establishment, fulfilling a critical defense contract, or respond to an armed conflict. Article 607 imposes no obligations and confers no rights on Mexico.[14]

Energy Regulatory Measures

Article 606 of NAFTA confirms that energy regulatory measures are subject to the rules concerning national treatment, import and export restrictions as well as to the provisions on export taxes. Such measures are also subject to the general exceptions noted above. Most significantly, Article 609 defines energy regulatory measures as "…any measure by federal or sub-federal entities that directly affects the transportation, transmission or distribution, purchase or sale of an energy or basic petrochemical good." This expands the coverage of the NAFTA disciplines affecting energy regulatory measures to all sub-federal entities, as compared to the general rules on standards contained Chapter Nine of NAFTA.

Under the Canada-US Free Trade Agreement (FTA), coverage was limited to measures by federal entities only. By contrast, under the NAFTA, the national treatment principle covers measures by states and provinces as well as federal entities. A further provision concerning energy regulatory bodies, albeit not an affirmative obligation, is that parties "shall seek to ensure" that energy regulatory bodies within their territory avoid disruption of contractual relationships and provide for orderly and equitable implementation appropriate to such measures. The term "energy regulatory bodies" remains undefined but considering that "energy regulatory measures" are defined to include sub-federal entities, it could be argued that regulatory bodies at the federal as well as at the sub-federal level are included.[15] (However, the language "shall seek to ensure" differs from an obligation, i.e., shall ensure, suggesting a different level of obligation.

Reservations on Electricity Production and Sales Entered into by Mexico

In Annex 620(3) to Chapter Six, Mexico has entered several reservations on strategic activities that concern, among others, trade and investment in electricity. Some exceptions to this reservation are however possible. The Mexican State reserves the right to supply electricity as a public service in Mexico, including generation, transmission, transformation distribution and sale of electricity. Private investment in any of the activities listed is not permitted except under the conditions provided in Annex 620(3) paragraph 5.[16]

The activities and investment in electricity generation facilities permissible are the production for own use of an enterprise as well as co-generation of electricity using energy sources associated with an industrial process. Electricity produced in excess of own supply needs must be sold to the Federal Electricity Commission (Comisión Federal de Electridad ("the CFE"). In addition, independent power producers ("IPP") located in Mexico must be sold to the CFE which is obligated to buy such electricity under terms and conditions agreed with the IPP. IPPs located in Mexico are allowed to export electricity to other NAFTA Parties. The negotiations between producer and the purchaser on terms and conditions of power purchases or sales shall be permitted by the Parties. The modalities of implementing the supply contracts are left to the end users, suppliers and the CFE.

Despite its reservation of the right to supply electricity and the conditions imposed on investment in Mexico by electricity producers from NAFTA countries, Mexico does not prohibit imports of electricity

[14] Annex 607 NAFTA

[15] Matthew L. Nolan and Kenneth R. Carretta, *NAFTA and US Oil and Gas Laws*, in: North American Free Trade Agreement, Commentary edited by James R. Holbein and Donald J. Musch, Booklet C.17, Release 95-3 issued June 1995 at page 5.

[16] See Annex 620(3) paragraph 1(c) and paragraph 2.

by NAFTA suppliers into the country. Mexico has entered exceptions to its Article 603 obligations on import and export restrictions.[17] Under these exceptions, Mexico may restrict the granting of import and export licenses for the purpose of reserving to itself foreign trade in certain goods listed in the Annex. The listed goods do not included electricity. Market access, however, is limited due to the reservations on distribution of electricity in Annex 620(3), since exporters of electricity will likely have to sell directly to the CFE.

US State Legislation on Renewable Resources

There are two groups of states that have legislation on renewable electricity resources. The first group of US state laws discussed below establishes the mandatory requirement that certain percentages of energy sold or consumed in a state come from renewable resources.

The legislation also contains a definition of what sources of energy constitute renewable resources. US states that refer to renewable electricity in total electricity portfolios include Arizona (currently seems to include only "new solar energy resources"), California with a subsidy-type support system for renewable resources based in that state only),[18] Connecticut (Class I or II technologies 5.5% in 2000; 6% in 2005, 7% in 2009 Class I technologies 0.5% in 2000 +0.25%/yr to 1% by 2002 +0.5%/yr to 3% by 2006 +1%/yr to 6% in 2009—Class I: solar, wind, hydro, sustainable biomass, landfill gas, fuel cells. Class II: hydro, MSW, other biomass), Maine (30% of sales in 2000 (start of competition) and thereafter as a condition of licensing—fuel cells, tidal power, solar, wind, geothermal, hydro, biomass, and MSW (under 100 MW) High efficiency cogeneration systems of unlimited size), Massachusetts (1% of sales from new renewables by 2003 +0.5%/yr. to 4% in 2009 +1% per year thereafter until date determined by Division of Energy Resources. Preliminary proposal does not include standard for existing renewables (~7%)—solar, wind, ocean thermal, wave, tidal, landfill gas, and low-emission advanced biomass beginning commercial operation or representing increase in capacity at existing facility after 12/31/97. Hydro and MSW qualify as existing), Nevada, New Jersey (Class I or II Technologies: 2.5% when BPU adopts interim standards with no sunset. Class I technologies: 0.5% more by 2001; 1% by 2006; +0.5%/yr to 4% by 2012—Class I: solar, wind, fuel cells, geothermal, wave, tidal energy, landfill gas, sustainable biomass. Class II: MSW or hydro that meets high environmental standards) and Pennsylvania (for PECO, West Penn, and PP&L, 20% of residential customers served by competitive default provider: 2% in 2001, increasing 0.5%/yr. For GPU, 0.2% in 2001 for 20% of customers increasing to 80% in 2004—non-hydro renewables).[19]

Legislation in the second group only provides a definition of the renewable resources included in the portfolio. Similar to the first group, those laws and regulations define which methods of electricity generation qualify as renewable resources, even if there is no mandatory requirement in the respective state to actually generate or consume electricity from such renewable resources. Likely mandatory portfolio requirements will be introduced at a later time for a number of those laws. The states where legislation provides a definition of renewable resources and encourages use of such resources but does not stipulate mandatory use are Arkansas, Delaware, the District of Columbia, Illinois, Maryland,

[17] Annex 603.3.

[18] Subsidy type-measures with financial contributions only to in-state providers of electricity from renewable resources enacted in California and proposed legislation in Arizona are not in contravention of the national treatment obligation, see Article III:8(b) of the GATT 1994. Since NAFTA does not include a regime on subsidies a compliance problem does not arise under NAFTA.

[19] Information as provided in CEC Database on Renewable Portfolio Standards, most recent update accessed August 2000, as well as from Table C-1 of *Seven Ways to Switch America to Renewable Electricity*, Union of Concerned Scientists (last updated June 29, 2001).

Michigan, Montana, New Hampshire, New Mexico, Ohio, Oklahoma, Pennsylvania, Rhode Island, Texas and Michigan.[20]

Some Trade Issues that May Arise under the National Treatment Obligation (Articles 606:1(a) and 301 of the NAFTA and Article III:1 and 4 of the GATT 1994)

Articles 301 and 606(1) of the NAFTA require national treatment to the goods of another party in accordance with Article III of the GATT. Article III:1 and 4 of the GATT 1994 prohibit less favorable treatment for foreign products sold in a country than that accorded to the "like" products of national origin. Both GATT 1994 rules as well as jurisprudence by WTO panels and the WTO Appellate Body can be taken into account for legal analysis of NAFTA provisions, since NAFTA panels have had recourse to WTO rules and jurisprudence in Chapter 20 proceedings of NAFTA.[21] Furthermore, it is important to note that there is no GATT/WTO case law on trade in electricity and that the only jurisprudence relating to the energy sector deals with petrol or gasoline.[22] As previously noted, there is no NAFTA jurisprudence dealing with trade in electricity.

The Application of Criteria Concerning Processes and Production Methods to Imported like-products

The requirement that electricity must come from renewable resources and what type of resource must be used in order to qualify as "renewable" is an example of what is often referred as a processes and production methods ("PPMs") measure. PPMs refer to the manner in which a product is manufactured or processed, as well as to information on natural resources that are extracted or harvested to product that good.[23] PPMs are frequently divided into two different categories. A process or production method can affect the product in such a way that the product itself pollutes or degrades the environment when it is consumed or used. This is considered a product-related PPM.[24] A non-product-related PPM exists where the manufacturing of the product has a negative impact on the environment, but the product itself does not carry any potential environmental damage (for example, through the release of pollutants into the air or water.) In the context of this paper the term PPM is understood as any PPM-based domestic trade measure that for environmental purposes distinguishes imported products by looking *beyond perceptible characteristics* of the product.

In the context of international trade rules and WTO law in particular, the question as to whether imports of a good can be regulated (i.e., restricted) on the basis of non-product related process and production methods is systematically linked to the like-product issue. The US legislation requiring that a portion of total electricity portfolios should be produced with renewable electricity, is an example of a non-product related PPM.

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[20] States with legislation/orders pending or with ongoing Commissions or legislative investigations which define renewable resources: South Carolina, Iowa, Missouri, Kansas, see CEC database.

[21] See *US Safeguard Action Taken on Broom Corn Brooms from Mexico*, USA-97-2008-01, page 20, where fore the determination of the adequacy of Mexico's consultations request the panel had recourse to Article 6.1 of the WTO DSU and the standard established by the WTO panel in *Brazil-Desiccated* Coconut; see also the panel's examination of the like-product concept under the GATT for its analysis of the same issue under NAFTA, page 25 of the report. See also the panel in *Tariffs Applied by Canada to Certain US-Origin Agricultural Products*, CDA-95-2008-01, where the panel examined the compliance with NAFTA of customs duties imposed by Canada on US products under the WTO Agreement on Agriculture.

[22] *United States—Taxes on Petroleum and Certain Imported Substances*, BISD 34/136 (the *"Superfund"* case) and *United States—Standards for Reformulated and Conventional Gasoline ("Gasoline")*, (WT/DS2) and (WT/DS4), panel report adopted May 20, 1996 as modified by the Appellate Body Report (WT/DS2/AB/R).

[23] Processes and Production Methods (PPMs): Conceptual Framework and Considerations on Use of PPM-Based Trade Measures ("OECD Study"), OCDE/GD(97) 137, p. 7.

[24] Ibid., p. 10.

The prescribed use of renewable resources for electricity production means that certain fuels, technologies or processes for generating electricity must be used/applied which are considered to be more environmentally friendly than conventional electric power generation methods. The fact that renewable resources were used in the process, however, is not a perceptible characteristic of the resulting end product. Electricity produced from renewable resources has exactly the same qualities as electricity generated from other (conventional) resources and it is the same whether domestically produced or imported. More specifically, imported electricity generated with a renewable resource *not included* in a state's renewable resources portfolio is "like" electricity produced by a domestic producer *within* the renewables definition of that state. The process and production measure in this case is therefore not embedded in the product itself. Domestic and imported electricity from renewable resources therefore need to be given the same treatment under Article 301 and 608 of NAFTA and Article III(4) of the GATT 1994.

There are no specific provisions in the text of the GATT 1994 itself which plainly discipline countries from making a distinction between traded like products based on criteria on factors which are not physically embodied in the product. The only clear provision in the WTO in this regard is the definition of a "technical regulation" contained in the Agreement on Technical Barriers to Trade (TBT).[25] The existing interpretations concerning the scope of application of trade rules to PPM-based measures have been based mainly on GATT jurisprudence and on the drafting history of GATT rules.[26] The most common view has been that when a good subject to a trade measure is "like" a domestic product, GATT provisions[27] do not permit treatment of an imported product less favorable than that accorded to the (domestic) like-product based on factors not related to the product as such. If an imported and a domestic product share the same physical qualities, i.e., are "like," the importing country cannot restrict or condition the internal offering for sale, purchase, transportation, distribution or use of imported products arguing that they must fulfill specific environmental standards.[28]

Domestic laws treating imported products less favorably than the domestic like-products can only be justified under the general exceptions of Article XX of the GATT 1994. Since there is no jurisprudence on PPMs under NAFTA, it must be assumed that the NAFTA national treatment provisions in Articles 606 and 301 would be interpreted in the same way as the national treatment rules under the GATT and lead to a similar result.

Substantive Discrimination or treatment of imported electricity less favorably than domestic electricity

Under the legislation of a number of US states the renewable resources definition could be considered to directly (i.e., on their face) as well as *de facto* exclude in general Canadian hydropower suppliers from

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[25] "Document which lays down product characteristics or *their* related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal with terminology, symbols, packaging, marking or labeling requirements as they apply to a product, process or production method." TBT Agreement, Annex 1, Technical Regulation. (emphasis added) This definition is discussed further within the context of Chapter Nine of NAFTA on Standards-Related Measures below.

[26] For a drafting history and interpretation of "like product," see GATT, Analytical Index: Guide to GATT Law and Practice, 6th Edition, 1995, Geneva.

[27] Case law exists under Articles III(4) and XI of the GATT 1994, but the analysis can likely be extended to cases involving most-favored-nation treatment.

[28] This is consistent with the most recent WTO case dealing with PPMs, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products ("Asbestos")*, WT/DS135/AB/R, adopted 5 April 2001. Upon appeal of this case the Appellate Body found within its analysis of Article III(4) that domestically produced PVA, cellulose and glass fibres or products containing those fibres are not "like" imported chrysotile asbestos fibres or products containing such fibres because one of the physical properties associated with chrysotile asbestos fibres is a health risk, see at para. 113 of the report.

selling in the market which may therefore receive less favorable treatment in contravention of the national treatment requirement.[29] It should be noted that *de facto* discrimination of hydropower suppliers is only one of several criteria contained in RPS measures, although perhaps the most obvious example of differentiation of resources of renewable electricity contained in the legislative definitions. There may be other examples such as the exclusion of electricity produced with methane gas from landfills, the exclusion of out-of-state renewable energy altogether, the preference for solar or wind as opposed to other sources, or a preference for renewable energy from a trash-to-energy sources.

(a) De facto *discrimination Caused by the Exclusion of Certain Renewable Resources from the Portfolio Definitions.*

The portfolio definitions do not, on their face, provide for different and less favorable treatment of electricity based on the country of origin. All producers who wish to sell electricity in a specific State are subject to the same definition of renewable resources and the percentage of electricity from renewable resources that must be sold or consumed in a State applies equally to domestic and foreign producers. Nevertheless, the generating methods included in the renewable portfolios tend to disadvantage out-of-State producers, including foreign importers, because of different regulatory, topographic and environmental conditions which influence electricity generation in different regions and countries. The legislation therefore tends to favor local products from specific regions and states and to (deliberately or inadvertently) *de facto* exclude imports from eligibility under the definition of renewable resources.[30] Several examples set out below illustrate this problem.

An example is currently pending Senate Bill 781 introduced in Missouri in June 2000. Renewable resources are defined as "usable energy recovered from solar, wind, biomass, and landfill and lagoon methane gas." This description includes lagoon methane gas which is not included as a renewable resource in any other state's definition of renewable resources and is likely to be special to the topography of Missouri (and perhaps to the interest of electric utilities in the state). At the same time, hydropower and geothermal electricity are not included in the renewable resources definition.

Another example is existing legislation in New Jersey providing for "interim renewable energy portfolio standards" that shall require: (1) that *two and one-half percent* of the kilowatt hours sold in this State by each electric power supplier and each basic generation service provider be from Class I or Class II renewable energy sources; and (2) beginning on January 1, 2001, that *one-half of one percent* of the kilowatt hours sold in this State by each electric power supplier and each basic generation service provider be from Class I renewable energy sources (emphasis added)." The definition of "Class I renewable resources" does not include hydropower and thereby excludes hydropower from being traded as a renewable resource. Furthermore, the current definition of "Class II renewable resources" only includes hydroelectric facilities of 30 megawatts or less.[31]

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[29] States that currently have *binding* legislation establishing mandatory portfolio standards and impose conditions on electricity derived from hydropower are Maine, New Jersey, Pennsylvania, and Rhode Island.

[30] *De facto* discrimination exists where different treatment of an imported product is not based on the origin of the product (*i.e.*, Canadian hydropower would be excluded from a renewable resources definition) but based on facially neutral criteria. These criteria effectively single out a specific product of a specific origin, as a result products originating from one country are *de facto* treated less favorably. The specific criteria can be, *inter alia*, the generation process of the product.

[31] A similar limitation on hydropower providers exists in legislation for Maine, where only those hydropower producing facilities are a renewable resource that qualify as a "small power production facility" under the Federal Energy Regulatory Commission rules or whose total power production capacity does not exceed 100 megawatts; similar restrictions apply in Arizona (5 MW), California (30 MW), Iowa (100 MW), Rhode Island (100 MW) and Vermont (80 MW).

Approximately 96 percent of Canadian hydro capacity is produced by hydro generating stations of greater than 30 MW. Moreover, roughly 60–65 percent of total Canadian exports of electricity to the US are produced from hydro power.[32]

The above legislative definition therefore, suggests clearly that large scale hydropower producers such as Hydro Quebec or Ontario Power Generation would be excluded from the supply of renewable electricity to several states for example, New Jersey. This possible exclusion of foreign producers by legislation defining renewable resources alters the conditions of competition in favor of products qualifying as renewable under definitions.

There are further factors that may contribute to altering the conditions of competition in favor of domestic products qualifying under the renewable resources definitions. The fact that hydropower from units above a certain size are excluded may create a disincentive to US electricity brokers to import Canadian hydropower generally since they will need to gather and administer information on the capacity of a plant. This could make the purchase of hydropower from Canadian producers more burdensome than from domestic producers. Commercial decisions of market operators are generally not covered by the GATT. However, GATT panels have found that if such a decision is guided by incentives or disincentives created in domestic legislation, that legislation in principle is considered as conferring more favorable treatment upon domestic products.[33] Although exporters are still able to sell electricity to US importers, the US importer may, because of the mandatory percentage, prefer to buy from an exporter who is able to provide electricity that falls within the definition of the renewables portfolio. This issue will become more and more relevant as the mandatory percentages for renewable electricity increase.

The above discussion serves to illustrate that the non-uniform criteria to define green electricity contained in the legislation of several US states may alter the conditions of competition between local electricity of the state passing the legislation and foreign electricity in such a way that foreign products receive less favorable treatment than domestic or local products.

Such a change of competitive conditions to the potential detriment of imported products has consistently been interpreted as a violation of the national treatment requirement of Article III of the GATT 1994 by GATT and WTO panels as well as the Appellate Body.[34] Moreover, it is not viewed as relevant whether the trade effects of modified competitive conditions between domestic and imported products are minor or cover only a small fraction of the trade volume (such as would be the case of criteria conditioning market access of electricity, based on definitions of renewable electricity), Article III of the GATT 1994 does not protect the expectations of a certain trade volume, but the equal competitive relations ship between domestic and imported products.[35] It is therefore irrelevant that the portfolio requirements to date cover only a small fraction of electricity production or consumption in most States. What is relevant under the national treatment requirement is that as a matter of law as well as of fact the competitive conditions for selling foreign (i.e., Canadian) electricity in the US are the same as for domestic or locally produced electricity.

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[32] Canadian Electricity Association (2000)—Electric Power in Canada 1998-1999, p. 68.

[33] *Canada—Administration of the Foreign Investment Review Act ("FIRA")*, BISD 30S/140, 158-59, paras, 5.4-5.6 ("voluntary" written purchase and export undertakings by investors seeking government approval to acquire Canadian companies found to be requirements).

[34] *Italian Discrimination Against Imported Agricultural Machinery*, BISD 7S/60, 64 at para. 12; *Japan—Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages*, BISD 34S/83, para. 5.5(b); Appellate Body report in *Japan—Taxes on Alcoholic Beverages*, WT/DS8/AB/R, adopted November 1, 1996, at p. 16.

[35] See cases listed in the previous footnote as well as *United States—Taxes on Petroleum and Certain Imported Substances*, BISD 34S/136, para. 5.1.9.

The same conditions of competition do not prevail, however, where a share of the market is subject to regulation which *de facto* excludes foreign producers from selling electricity.[36] This leads to less favorable treatment of imported compared to domestically produced electricity.[37] Again, and as pointed out above, in the absence of any NAFTA panel decisions on the interpretation of the national treatment clause it must be assumed that such a panel would come to a similar result.

(b) Licensing Requirements that apply only to hydropower facilities

Another situation potentially leading to *de facto* discrimination may occur where hydropower facilities that want to qualify as a renewable resource need a special license.[38] The necessity for a company to hold a license in order to sell electricity within the renewable resources definition is likely to affect the sale of that good. Necessary circumstances to determine *de facto* discrimination may include that there are a limited number of large-scale hydropower producers in the State so that it would be certain that a Canadian producer intending to export would be mostly or exclusively subject to the licensing requirement. Another possible scenario leading to de fact discrimination would be that the criteria applied for granting the license would *de facto* exclude foreign producers.

(c) Supply of Renewable resources limited to in-state suppliers

Other examples which may point to potential environment-related trade disputes include provisions contained in RPS that require renewable electricity to be produced only within the jurisdiction of that State. This appears to be the case for proposed or tabled legislation in Nevada and Oklahoma.[39] The proposed legislation would appear to exclude all out of state providers of renewable energy, and therefore raise issues about the national treatment requirement of Article III:4 of the GATT 1994 and of Article 301 of NAFTA.

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[36] Although in some States the percentage of energy derived from renewable resources out of the total electricity consumed in that State is as small as 0.2 percent (see, e.g., Arizona), the portfolio share of renewable resources is being increased in accordance with differing time-tables in all States. In Maine a competitive electricity provider must demonstrate that no less than 30% of its portfolio of supply sources for retail electricity sales in that State are accounted for by renewable resources.

[37] With respect to the application of the renewable resources legislation to out-of-state domestic products (US electricity) it is possible that not only foreign producers are subject to *de facto* discriminatory treatment but that domestic electricity producers equally cannot sell renewable energy because they do not qualify under the renewable resources definition of a specific state. Article III:4 of the GATT 1994 requires treatment of imported goods not like any domestic product but like the most-favored domestic products, see the GATT panel in *United States—Measures Affecting Alcoholic and Malt Beverages*, adopted on 19 June 1992, BISD 39S/206/280, para. 5.33. There is no reason why this rule would not equally apply in the case of discrimination against imported products, in particular when the large majority of products discriminated against are foreign.

[38] Connecticut Law H.5005 provides that "Class II Renewable Energy Source" means energy derived from a trash-to-energy facility; or a biomass facility that does not meet the criteria for a Class I renewable energy source or a hydropower facility, provided such facility has a license issued by the Federal Energy Regulatory Commission, has been exempted from such licensure, is the subject of a license application or notice of intent to seek a license from said Commission, has been found by the Commissioner of Environmental Protection to be operating in compliance with the Federal Clean Water Act, or has been found by the Canadian Environmental Assessment Agency to be operating in compliance with said Agency's resource objectives."

[39] Nevada AB 366 (June 1999); Oklahoma SB 220 with implementation statutes and guidelines, to be reintroduced with Oklahoma legislature in February 2001.

General Exceptions under the GATT 1994 and NAFTA

Measures by a NAFTA Party or a WTO Member which are inconsistent with national treatment or other requirements may still be acceptable under the respective agreement, if the country imposing the measure is able to demonstrate that it falls within a legal exception.

The general exceptions in Article 2101 of the NAFTA incorporate Article XX of the GATT 1994. In the GATT, trade restrictive measures that aim at environmental protection can be justified either under Article XX(b) of the GATT providing for the adoption or enforcement of measures "necessary to protect human, animal or plant life or health" or under Article XX(g) justifying measures "relating to the conservation of exhaustible natural resources…." Article 2101 NAFTA particularly stresses the importance of those two paragraphs.[40] Even if measures fall within Article XX paragraph (b) or (g), they will still be "subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade. This language is in the so-called chapeau to Article XX.

(a) Conservation of Exhaustible Resources, Article 2101 of NAFTA and Article XX(g) of the GATT 1994

At a general level, the laws on renewable resources (and particularly those that impose mandatory portfolio standards as opposed to legislation simply defining what constitutes a renewable resource) have the objective of reducing environmental degradation and greenhouse gases leading to climate change associated with conventionally-fuelled or generated electricity.[41] RPS-laws could, in the case of a dispute, be examined under Article XX(g), which has been interpreted to include clean air as an exhaustible natural resource.[42] A panel may also examine whether the legislation establishing renewable resources portfolios is "relating to the conservation [of exhaustible natural resources]" or even more specifically "aimed at" the conservation of exhaustible natural resources.[43]

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[40] Article 2101: General Exceptions reads as follows:

1. For purposes of:
   (a) Part Two (Trade in Goods), except to the extent that a provision of that Part applies to services or investment, and
   (b) Part Three (Technical Barriers to Trade), except to the extent that a provision of that Part applies to services,

GATT Article XX and its interpretative notes, or any equivalent provision of a successor agreement to which all Parties are party, are incorporated into and made part of this Agreement. *The Parties understand that the measures referred to in GATT Article XX(b) include environmental measures necessary to protect human, animal or plant life or health, and that GATT Article XX(g) applies to measures relating to the conservation of living and non-living exhaustible natural resources.*
Emphasis added by the author.

[41] Recognizing the link between climate change and renewable energy, the Council of the Commission for Environmental Cooperation, June 2001, instructed the CEC Secretariat "to explore further opportunities for market-based approaches for carbon sequestration, energy efficiency and renewable energy in North America."

[42] Panel report in "*Gasoline*"*(* WT/DS2/9), adopted as modified by the Appellate Body report 20 May 1996, at para. 6.37.

[43] The phrase "primarily aimed at" is not in itself treaty language of the GATT and was introduced by the panel in the case *Canada—Measures Affecting Exports of Unprocessed Herring and Salmon*, BISD 35S/98, para. 4.6, see also the Appellate Body report in *Gasoline* at page 20. This criterion, however, was not taken into account by the panel in *Shrimp-Turtle*.

This precondition raises a jurisdictional issue, since renewable resource portfolios impose conditions on the production of electricity not only in the US for imported electricity which is produced in other countries (i.e., NAFTA countries). The legislation imposes requirements as to the clean or environmentally sound generation of electricity and environmental protection outside the US jurisdiction and therefore imposes its goal of clean air not only within US territory, but also within the territory of its electricity exporters, such as Canada and Mexico.[44] It is unclear whether there is an unwritten jurisdictional requirement in Article XX(g).[45]

Issues surrounding jurisdictional requirements have advanced in light of the Appellate Body's decision in *Shrimp-Turtle*. In that finding, the extra-territorial aspect appears to have been replaced by a somewhat more complex task of balancing the environmental issue being addressed, and the measures being undertaken to address it. The exact relationship between the environmental issue and measure taken was not explicitly addressed by the Appellate Body.

The WTO panel and Appellate Body in *Gasoline* did not state whether there must be a connection between the jurisdiction issuing the measure, the source of pollution and where the exhaustible natural resource is located. In that case, however, the issue was unproblematic since the imported gasoline was consumed in the US and therefore polluted clean air within US jurisdiction once it was used/consumed in the US[46] It could, however, be argued that clean air within a region, e.g., North America, is a shared resource between countries and that air pollution caused in Mexico or Canada has a negative impact on

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[44] It is important to note that other environmental initiatives in North America are being considered which raise similar (and arguably more important) NAFTA or WTO issues as those which arise from RPS criteria example. For example, a number of sub-federal jurisdictions appear to require out-of-state or out-of-province electric power generators to conform with, or have equivalent, air emission standards as a condition of access to the in-state or in-province electricity market. For example, generation portfolio standard requirements initiated by Connecticut and Massachusetts require that in-state retailers ensure that *all generators*—that is, in-state and out-of-state generators -- comply or have equivalent emission standards for criteria air pollutants as those enacted in those states. This provisions has a triggering mechanisms based on the size of the total market. A more blunt initiative than that directed at in-state retailers is found in the Government of Ontario initiative of January 2000, in which new polices were announced to address air pollution through provincial emission performance standards and other initiatives (e.g., emissions trading schemes). The Government of Ontario noted:

> The government is proposing emission performance standards to specify environmental requirements for all electricity sold in Ontario. These emission standards would apply to generators in Ontario *and to generators outside of Ontario selling into the province. In this way, the government intends to ensure that even imported electricity that is used in Ontario is produced in compliance with the province's tough new emission standards.*
>
> Government of Ontario Press release, *Ontario Announces New Strategic Attack on Air Pollution.* 24 January, 2000.

As of November 2001, there have been no additional press releases or formal announcements by the Government of Ontario on the above initiative to condition the access of Ontario's electricity market to only those generators that comply with Ontario's environmental emission standards. (Communication with John Steele, Ontario Ministry of the Environment, November 13th, 2001.)

[45] The panel and the Appellate Body in *Shrimp-Turtle* seem to acknowledge such a requirement by stating that all turtle species at issue in the case occurred in waters subject to US jurisdiction and that turtles were migratory species traveling through those waters, Appellate Body report at para. 133. It was not stated, however, that the turtles in the waters of the plaintiffs were the same as those swimming in US waters. The Appellate Body also states as follows: "We do not pass upon the question of whether there is an implied jurisdictional limitation in Article XX(g), and if so, the nature or extent of that limitation. We note only that in the specific circumstances of the case before us, there is a sufficient nexus between the migratory and endangered marine populations involved and the United States for purposes of Article XX(g)." *ibid.*

[46] Consistent with the terminology established in the previous section, the US measure in that case can therefore be considered as a product-related PPM.

air quality in the US The requirement to use renewable resources for a part of electricity production or consumption instead of electricity produced by a coal-fired plant could arguably bring about the reduction of transboundary pollution in North America.

Whether such an argument would stand up in a NAFTA or WTO dispute is an open question and such an argument would certainly need to be supported by (scientific) evidence showing the damage. Nevertheless, given that the Appellate Body in *Shrimp-Turtle* considered the fact that sea turtles are migratory species and "are *known to occur* in waters over which the United States exercise jurisdiction" a "sufficient nexus" to create jurisdiction for the US, there seems to be a good chance that jurisdiction could be established where air pollution can travel from the air space over one country into that of a neighboring country (emphasis added). Examining it at this general level, the PPM measures may therefore be justified under Article XX(g) of the GATT 1994 and Article 2101 of NAFTA.

Looking at the portfolio requirements more closely, however, the specific way different RPS legislation is designed in some states raise questions about its ability to meet (albeit-defined) GATT- Article XX exceptions. As noted above, the portfolio requirement in a number of laws may be seen as *de facto* discrimination against hydropower providers.[47] Those portfolio requirements establish the permissible maximum size of a hydropower plant, (e.g., through flooding of territory, building of a dam etc.). Although the precise environmental justification of RPS criteria are not explained in detail, it seems that electricity producing resources that are not considered beneficial for the environment, i.e., hydropower plants above certain size or other renewable sources of energy, are excluded from the portfolio. Whatever the aims and objectives of the specific criteria are, it is arguable whether they would be considered a justifiable objective for conservation of exhaustive resources under Article XX(g). Construction of a large scale hydropower plant, dam building, flooding etc. have negative environmental impacts.

However, it its more difficult to determine the extent to which hydropower will have negative environmental impacts outside of the jurisdiction in which they are built and operated. Certainly, there are transboundary environmental impacts of hydropower projects. These impacts are difficult to generalize, which is precisely why robust Environmental Impact Assessments (EIAs) are needed to address not only site-specific environmental issues, but also upstream and downstream impacts. Obviously, large-scale hydropower projects affect upstream watersheds and fisheries. Moreover, hydropower has significant impacts on transboundary air pollution. Although clearly air pollution problems will differ from fossil-fuel burning electric power generation, air pollution can include both mercury and carbon dioxide emissions. Taking into account the *Shrimp-Turtle* decision, the extent of transboundary environmental damage would likely need to be evaluated if possible harm to biodiversity or other environmental indicators were in fact limited to one territory or whether effects could be measured in other jurisdictions.

As a general observation, GATT Article XX has not been read expansively so as to permit one WTO Member to act extra jurisdictionally to force another Member's nationals to change their practices *within* their own national territory, when the impact of these practices is *limited to* their national territory, when the practices are regulated under the jurisdiction of their own governments and when the practices comply with these regulations. (At the same time, it is important to note that no cases have arisen involving GATT Article XX that fit into the hypothetical scenario raised in this paper.)

It should also be noted that panels have interpreted Article XX narrowly, in order to preserve the basic objectives and principles of the GATT.[48] A trade measure would be easier to justify under Article XX(g)

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[47] See Section V.2.a.

[48] *United States—Section 337 of the Tariff Act of 1930*, 1989, BISD 36S/345, 393, paragraph 5.27; see also *FIRA*, paragraph 5.20, *Gasoline*, at pp. 22-23. The Tuna-Dolphin II panel found that if GATT "Article XX were interpreted

if it had one clearly recognizable objective instead of targeting a sweeping array of aims of environmental protection.

The complete exclusion of out-of-state producers from the provision of renewables electricity may not be justified under Article XX(g), since there is no obvious reason why and how the exclusion of foreign produced electricity from the renewable portfolios could serve the goal of air quality improvement.

(b) The Chapeau Requirements of Article XX of the GATT 1994

Trade measures further have to comply with the chapeau of Article XX of the GATT 1994 requiring that a measure shall "not be applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail" or as a "disguised restriction on international trade."

The way the portfolio requirements in a number of states are designed could, under certain circumstances, constitute an "arbitrary or unjustifiable discrimination between countries" (i.e., between Canada and the US). Arbitrary or unjustifiable discrimination can occur not just between two different exporting countries but also between an exporting country and the importing country concerned.[49] For the comparison of countries, the complete territory of each country involved must be taken into account. In the case of a Party or Member with a federal system it would not be sufficient to take into account the laws and regulations [on renewable resources] of just one state (or province), since the entire country is the Party or Member to the trade agreement (NAFTA or the WTO) even if the legislation at issue was passed at the state level. This principle is the basis for regional observance of trade issues provided in Article 301(2) of NAFTA and Article XXIV(12) of the GATT 1994.

To examine whether "the same conditions prevail," a scenario could be assumed where US (sub-) state A excludes certain types of renewable resources from its portfolio definition and US (sub-) state B includes all possible renewable resources.

A country exporting electricity from any given renewable resource into the US will encounter "the same conditions" as in its own country in at least a part of the US territory, namely state B. If one state allows what another state disallows or excludes, the same conditions prevail in at least a part of the country (state B) as in the exporting Country.

Such discrimination could appear to be arbitrary, since there is no reason why imports of electricity from certain renewable resources should be disallowed in one part of the territory of a Party or Member if they are included in the legislation in the other part.

However, the above example is only intended to be a general example. The wording "same conditions, while intended to presumably address the same *commercial conditions*, should also be viewed as encompassing the same *ecological or environmental conditions* in which the measures are applied and allowed under the exceptions provisions. Determining the similarity or differences in ecological conditions is arguably more difficult than determining commercial or competitive conditions. Factors that determine ecological conditions include the state of diverse ecosystems, topographical factors,

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to permit contracting parties to take trade measures as to force other contracting parties to change their policies within their jurisdiction, including their conservation policies, the balance of rights and obligations among contracting parties, in particular the right of access to markets, would be seriously impaired. Under such an interpretation the General Agreement could no longer serve as a multilateral framework for trade among contracting parties." (See Tuna-Dolphin II, paragraph 5.26). The report of this panel was never adopted. However, it has provided guidance to the findings of subsequent panels, including the Appellate Body Report on Japan-Taxes on Alcoholic Beverages, adopted 1 November 1996, WT/DS8, DS10, DS11/AB/R, p. 14, and the Report of the Panel on US-Import Prohibition on Certain Shrimp and Shrimp Products, 15 May 1998, WT/DS58/R, pp. 283, 292.

[49] United States—*Gasoline*, page 23-24.

biodiversity, past and present pollution damages, changes in forest cover, changes in forest quality, land use- change and myriad of other conditions.

Several of the portfolio requirements examined above which may constitute *de facto* discrimination against hydropower in particular may be considered a "disguised restriction on international trade." The meaning of "disguised restriction" includes disguised discrimination in international trade as well as concealed or unannounced restriction.[50] The exclusion of certain electricity producer categories from the renewable resources standards on the basis of objectives that are not clearly included in the objectives of this legislation and which *de facto* single out such producers could be considered as concealed discrimination.

Chapter Nine of NAFTA on Standards-Related Measures

A discriminatory measure that is justified under the general exceptions can still be subject to the requirements of Part Three of NAFTA on technical barriers to trade, specifically Chapter 9 on standards-related measures.

Under this Chapter, standards-related measures are defined as "a standard, technical regulation or conformity assessment procedure."[51] The renewable resources portfolios could be considered to establish a standard, since they define what type of resources qualify as renewable resources. However, there is a clear distinction in the WTO TBT Agreement (definitions) between a standards-related measure, a technical regulation and a standard. A technical regulation and a standard, as well as a conformity assessment procedure, are standard-related measures. However, a technical regulation cannot be a standard (or vice versa). The difference generally concerns the level of compliance with different measures. A technical regulation regulates in a mandatory or compulsory manner, while compliance with a standard or standards-related measures is voluntary.

Article 904(1) of NAFTA allows for Parties' basic right to take standards-related measures. It provides that "each Party may, in accordance with this Agreement, adopt, maintain or apply any standards-related measure, including any such measure relating to safety, the protection of human animal or plant life or health, the environment or consumers, and any measure to ensure its enforcement or implementation." In pursuit of these objectives Parties may establish levels of protection that they consider appropriate.[52] When establishing domestic levels of protection a Party needs to avoid "arbitrary or unjustifiable distinctions between similar goods or services in the level of protection it considers appropriate."[53] This provision prohibits such distinctions where they can lead to arbitrary or unjustifiable discrimination against goods or services providers of another Party, a disguised restriction on trade between Parties or where they discriminate between similar goods or services for the same use under the same conditions that pose the same level of risk and provide similar benefits. Individual country levels of protection are subject to risk assessment in Article 907(1).

For the conduct of risk assessment several factors can be taken into account: available scientific evidence or technical information; intended end uses; processes or production, operating, inspection, sampling or testing methods; or environmental conditions.

According to Article 904:3, standards-related measures relating to goods and services are subject to the national treatment provision of Article 301 and to most-favored-nation treatment. In addition to the national treatment requirement, Article 904(4) forbids Parties to "prepare, adopt, maintain or apply any standards-related measure with a view to or with the effect of creating an unnecessary obstacle to trade

[50] *Gasoline*, p. 26.
[51] Article 915 on definitions.
[52] Article 904 pararaph 2.
[53] Article 907 paragraph 2.

between the Parties."[54] Such "an unnecessary obstacle shall not be deemed to be created" where the demonstrable purpose of the measure is to achieve a legitimate objective and the measure does not operate to exclude goods of another Party that meet the legitimate objective. Legitimate objectives under this provision include, *inter alia*, the objectives enumerated in Article 904(1) above and sustainable development.[55]

It is important to note that Article 904(4) could be considered to provide for language that goes further than the provisions on national treatment and most-favored-nation treatment in Article 904(3) and that appears to impose additional obligations. The language used in Article 904(4) is similar to that of Article 2 of the WTO Agreement on Technical Barriers to Trade ("the TBT Agreement"). Article 2(2) of the TBT Agreement provides that "Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade." To this end, Article 2(2) further requires that "technical regulations shall not be more trade restrictive than necessary to fulfill a legitimate objective."

It must be taken into account that, thus far, no case law on the WTO TBT Agreement and no panel or Appellate Body legal interpretations exist of what would or would not be an "unnecessary obstacle to international trade" and "more trade restrictive than necessary." Concrete examples under the TBT Agreement of the "least trade restrictive" standard do therefore not yet exist. It must furthermore be assumed that the standard in the Article 904(4) may not be exactly the same as in the TBT Agreement, since it does not include the specific language that implies the least-trade-restrictive test in Article 2(2) of the TBT Agreement. Nevertheless, it would likely be a similar test since Article 904(4) establishes a "necessity test." When examining the "necessity" of a measure, WTO panels and the Appellate Body have looked at the question whether a WTO-consistent alternative measure would be available to the country imposing the measure.[56] Under NAFTA the requirements established by the necessity-test would be softened by the "shall not be deemed" language in Article 904(4). This formulation indicates that if the Party imposing the measure can establish *prima facie* that the purpose of the measure is to achieve an objective recognized under Article 904(4) NAFTA and that it does not operate to exclude the goods of another Party meeting the objective, there will normally be a presumption that no "unnecessary obstacle" exists.

If reviewed by a NAFTA panel, the US legislation on renewable resources would likely be subject to a stricter standard than that of non-discrimination and its justifications under Articles 2101 [and Article XX (g)] of the GATT 1994. When looking at the necessity of a measure a NAFTA panel may come to the conclusion that the introduction of renewables portfolio standards *per se* is an effective means to achieve the goal of clean(er) air and that the US cannot be expected to rely exclusively on alternative measures, such as command and control regulations, performance standards, emission caps or other measures in place. This would appear to be an alternative measure available that the US could be expected to apply. However, the fact that different states have differing renewal portfolio requirements

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[54] According to Article 903 of NAFTA, "the Parties affirm with respect to each other their existing rights and obligations relating to standards-related measures under the GATT Agreement on Technical Barriers to Trade."
[55] See Article 915 on definitions.
[56] In all of these cases the term "necessary" was interpreted in Article XX (b) or (d) of the GATT 1994. No interpretations of the same term in the TBT Agreement exist as of yet. See most recently the Appellate Body in *Asbestos* at para. 170. See also the Appellate Body in *Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WT/DS161/AB/R, WT/DS169/AB/R, adopted 10 January 2001 at paragraph 172-174 and the panel report at paragraph 664. See also the panel in *Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes*, BISD 37S/200, paras. 77ff.

as well as non-uniform definitions of what constitutes renewable electricity could call into question the necessity and effectiveness of such measures in achieving environmental objectives.

In any event, in view of the definition of technical regulations under Article 915 of NAFTA, which is similar to that under the GATT TBT Agreement, a panel reviewing the US legislation on renewable resources could conclude *prima facie* that the legislation at issue constitutes a measure not covered by Chapter Nine of NAFTA (in the way that it would not likely be covered by the GATT TBT Agreement), and that it would therefore be inconsistent with the provisions set out in such Chapter. Indeed, a technical regulation—meaning a "document which lays down good characteristics or their related processes and production methods"—cannot define a piece of legislation which regulates product-related PPMs in general, as the US legislation appears to have the intention of doing. The word *their*, referring to the characteristics of the goods themselves, limits evidently the scope of the definition to regulations which mandate product processes and production methods only to the extent that such PPMs relate to the product's physical characteristics. That is, Chapter Nine of NAFTA (as well as the provisions of the GATT TBT Agreement) cover/allow, subject to the specific disciplines set out in their provisions, the adoption or application of any technical regulations insofar as it concerns product-related PPMs.

There are different points of view as to whether the language of the WTO TBT Agreement opens the door to recognition of non-product related PPMs.

It remains an open question as to whether a panel, after arriving at such a distinction in coverage, would find it necessary and justifiable to proceed with the examination of the measure in the light of GATT Article XX, in which case the discussion reverts back to the issues addressed above relating to this GATT article.

Harmonization, Policy Cooperation and Possible Next Steps

The lack of harmonization around the definition of renewable portfolio standards may create legal disparities for market participants involved in trade with electricity. Lack of harmonization exists at the domestic level, as illustrated above. Lack of harmonization also exists on the international level, since neither NAFTA nor any other international organization currently provides for binding or even non-binding guidelines as to what constitutes a renewable resource. Even a non-binding definition issued by an international organization would provide a useful tool in adapting and harmonizing standard-related measures currently existing in countries such as the US or in establishing legislation in other countries where restructuring projects of electricity markets including the use of renewable resources portfolios is currently taking place or planned.

In this regard, it is worth mentioning that various GATT/WTO panels have recommended/noted that cooperation among parties in establishing appropriate and mutually acceptable criteria for standards-related measures, particularly in respect to problems beyond national jurisdiction and on matters of mutual interest, is a preferable alternative to the use of trade restrictive measures, and that international agreements—as opposed to unilateral measures—have for some time been recognized as an approach to shared environmental problems.[57] The foundations of these recommendations appear also in the conclusion of the WTO Committee on Trade and Environment.[58]

A commitment to cooperation to address shared environmental problems, and coordinate domestic environmental policies through international action, also serves as the foundation of all of the approximately 185 Multilateral Environmental Agreements and many more bilateral and regional

[57] See for example, the GATT Tuna-Dolphin I panel (para. 6.4) and the WTO Shrimp-Turtle panel (para. 50).
[58] Report (1996) of the Committee on Trade and Environment, WT/CTE/1, 12, November 1996, para. 171.

environmental agreements that have been adopted.[59] This spirit of fostering cooperation in environmental protection also forms the basis of the Council functions of the Commission for Environmental Cooperation. For example, Article 10(3) of the North American Agreement on Environmental Cooperation states:

> The Council shall strengthen cooperation on the development and continuing improvement of environmental laws and regulations, including by:
>
> (a) promoting the exchange of information on criteria and methodologies used in establishing domestic environmental standards, and
>
> (b) without reducing levels of environmental protection, establishing a process for developing recommendations on greater compatibility of environmental technical regulations, standards and conformity assessment procedures in a manner consistent with the NAFTA.[60]

Pursuant to Article 10(3), the Secretariat of the CEC has compiled (as noted) an on-line data base that compiles all criteria related to renewable portfolio standards in North America, as well as voluntary, market-based standards that provide definitional clarification of renewable energy. In addition to contributing to the transparency of RPS schemes, the CEC database in designed to examine the comparability of renewable criteria. By providing a mechanism to compare differing criteria of RPS and related voluntary measures, the CEC database provides a tool in support of efforts to harmonize a North American definition of renewable energy. (Similar efforts are currently underway in the context of the North American Energy Working Group towards a North American wide standard for energy efficiency for products.)

In November 2001, the CEC Secretariat invited the Parties to the North American Agreement on Environmental Cooperation, as well as some members of nongovernmental organizations, to a meeting on renewable energy. The meeting, which will be held in February or March 2002, will examine opportunities for increased North American cooperation in renewable electricity initiatives, including opportunities for enhanced cooperation in standards-related measures related to RPS measures.

[59] See UNEP (1998), Policy Effectiveness and Multilateral Environmental Agreements; UNCED, Rio Principles and Agenda, etc.

[60] North American Agreement on Environmental Cooperation between the Government of Canada, the Government of the United Mexican States and the Government of the United States of America, Article 10(3).

Section Two: Chapter Eleven: Investment

The scope of coverage of NAFTA Chapter Six: Energy and Basic Petrochemicals applies both "to measures relating to energy and basic petrochemicals goods originating in the territories of the Parties, *and to measures relating to investment…* " (NAFTA Article 602(1), emphasis added). [The definition of investment contained in Chapter Six, Article 609, refers to the definition of investment contained in NAFTA Chapter Eleven, Article 1139 (Section C, Definitions).]

NAFTA Chapter Eleven provides a range of rights for NAFTA-based investors seeking to invest into the electricity sectors of one of the other two NAFTA parties, as well as in sectors such as the supply of oil or natural gas that are part of the electricity infrastructure. These rights are described below, along with an explanation of the limitations placed on these rights by Mexico's reservations in relation to the energy sector. A general indication of the possible applications of Chapter Eleven to the generation and sale of electricity when foreign investors are involved is also provided.

The General Scheme of Chapter Eleven: Investor Rights and Private Remedies

Chapter Eleven of NAFTA is simply titled "Investment." Behind this simple title lies a broad range of rights designed to protect foreign investors from certain types of government actions and provide remedies to the foreign investors if those actions occur. Historically, investor protection was developed to prevent governments from nationalizing or expropriating the assets of a foreign owned company without paying proper compensation. Over time, investor protections have been expanded to include other concepts such as requiring a foreign company to be treated the same as a domestic company, establishing a concept of minimum international standards of treatment for all foreign owned companies, and prohibitions against requiring companies to manage their business based on operating parameters or economic benefits determined by governments.

The investor protections are accomplished by placing obligations on governments where the investment takes place (the host state) not to breach the obligations set out in Chapter Eleven. Government actions that breach these obligations can include legislative or regulatory measures, administrative decisions, policy enactments, or other acts in relation to the investor. All levels of government are covered by these obligations (national, state/provincial, municipal), as well as all branches of government (legislative, executive and judicial). In the context of electricity, for example, electricity regulating boards at federal, state, provincial or local levels would likely all be included, unless excluded by specific provisions of NAFTA.

Special remedies that only foreign investors from another NAFTA party can use accompany the rights under Chapter Eleven. These flow from the so-called investor-state arbitration process that is described in Section B of Chapter Eleven. Under the Section, once a limited number of conditions are met, a foreign investor can initiate an arbitration process directly against the state into which the investment has been made if the investor believes that one of the obligations on states (rights of the investors) has been breached. (It is always the national government against which a claim is made, regardless of the level of government whose act is being challenged.) This is significantly different from trade law more generally, including the rest of NAFTA, where only states and not private companies can initiate legal proceedings to enforce the provisions of the Agreement.

Using the investor-state process, a foreign investor can directly seek the opinion of a panel of three arbitrators on whether the host state has breached its obligations. If the ruling goes in favor of the investor, the panel can then award compensation for damages suffered. There are some opportunities to judicially review the award of a panel, but these are limited to issues of whether the tribunal has

exceeded its jurisdiction, a much higher threshold than simply whether they may have made an error in law. This higher threshold for review means that only decisions that bring in legal or factual issues outside the scope of what is found in Chapter Eleven can be set aside, rather than simply "incorrect" rulings on the substance of Chapter Eleven. Further, if set aside, the cases would almost invariably be remanded back to the arbitral body that made the initial decision.[61] A tribunal cannot compel the withdrawal of a measure or an act by a government, but may well factor in the duration or long-term impact of the challenged act in determining damages to be awarded.

With this general outline in mind, the most important specific rights of companies and equivalent obligations of NAFTA parties may be considered.

Rights of establishment

A key feature of the NAFTA chapter on investment was to set out a general right for foreign investors to establish themselves in any market. This general right is then made subject to exceptions that are specified by each NAFTA party in Annex II to NAFTA and in other provisions. As regards the electricity sector, Mexico has set out extensive reservations for the application of investment rules: Annex II and Annex 620(3) in particular specify that private investment in the energy sector is not permitted. Canada and the United States have significantly fewer and narrower exceptions to this right of establishment. The full scope of these exclusions is similar to what was described more generally in relation to NAFTA as a whole, and need not be repeated here.

The scope of the exclusions is important for each of the generation, transmission/transformation, distribution and sale of electricity and for the ability to import or export resources for electricity generation such as oil or natural gas. Once a right of establishment is available, foreign investors will generally benefit from the other rights described below. These further rights apply to all stages surrounding both the making of an investment and its subsequent operations.[62] This situation is, however, less clear with respect to Mexico. Joint ventures or other contractual arrangements to perform activities for the Government of Mexico may still be permissible now or in the future even when direct private investment is not. The complete exclusion of investment is also modified for facilities designed to produce electricity directly for use in a specific industrial facility or for independent power production facilities (which may sell electricity to the state enterprise responsible for distribution). Thus, whether the use of the word "investment" in Annex 602(3) precludes by definition any application of Chapter Eleven to any form of energy-related business activity in Mexico, or whether the remaining disciplines of Chapter Eleven would apply in the event any such type of activity is undertaken consistent with Mexican law is not fully clear.[63]

This uncertainty extends to whether Chapter Eleven would establish the right to import electricity generating resources such as oil or natural gas, investments relating to such imports being excluded by the general provisions of Annex 602(3). In addition, Mexico also reserved the right to impose special limits or constraints on foreign investors if it does allow foreign direct investment in this sector in the future.[64]

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[61] The conclusions are seen in the decision concerning the first Chapter 11 decision to be subject to review, *The United Mexican States v. Metalclad*, Supreme Court of British Columbia, 2001 BCSC 664, May 5, 2001.

[62] A fuller description of these rights, based on the text of NAFTA as well as the initial set of case law in the area, is found in Mann, Howard, *Private Rights, Public Problems: A Guide to NAFTA's Controversial Chapter on Investor Rights*, Winnipeg, International Institute for Sustainable Development and World Wildlife Fund, 2001. (Available at www.iisd.org/pdf/trade_citizensguide.pdf.)

[63] Subject to the conditions set out in Article 5 of Annex 602(3).

[64] NAFTA, Annex III, Mexico.

National treatment

Article 1102 of NAFTA sets out the right to national treatment. This right is essentially a right to be treated in a similar manner to investors that are in like circumstances and based in the host state. In short, a foreign company should be treated no less favorably than a domestic company. The only case that has dealt with the scope of this article has given the idea of national treatment and "in like circumstances" a wide breadth, arguing this is consistent with the intent of the provision.[65] In the electricity context, with generation, transmission and delivery understood as well defined sectors, it is likely that identifying companies for the purpose of assessing whether a foreign investor is treated similarly to a domestic investor will be a fairly straightforward task.

What is less clear is how the standard of no less favorable treatment would be applied in the pre-establishment phase, in particular the environmental assessment of generating and transmission facilities, including their transboundary environmental impacts. How the examination of cumulative impacts, impacts on climate change, transboundary impacts, etc. are to be compared between older actors and potential new capacity suppliers is not clear. In addition, the establishment of more stringent ambient air quality and end-of-pipe emissions standards will have an effect on new actors that was not present for the assessment of older actors. Consequently, it is likely that any national treatment assessment in this regard will have to be adjusted for these factors when assessing whether companies are "in like circumstances" and whether treatment is no less favorable in a procedural sense, bearing in mind that changing standards will presumably lead to higher environmental requirements on all new actors.

Minimum standard of treatment

Article 1105 of NAFTA sets out a standard requiring foreign investors to be treated "in accordance with international law, including fair and equitable treatment and full protection and security." The central thrust of this standard calls for minimum levels of fairness in dealing with foreign investors, in particular in an administrative context. It seeks to prevent arbitrary acts against such investors and their investments, and the abuse of government authority to interfere with the operation of an investment. For example, a military barricade of a facility could be covered by this obligation. At a lesser level, arbitrary bureaucratic decision-making and a lack of appropriate transparency in decision-making could also, where appropriate, be covered.

This article can be seen as creating minimal levels of due process guarantees for foreign investors. Initial cases in this area had appended government obligations arising from other treaties to the concept of minimum international standards, thereby going beyond the customary international law framework described above.[66] However, the NAFTA Free Trade Commission has recently adopted a statement that will limit any future interpretation to the scope of customary international law, and exclude the reliance on treaty law as a direct source of new rights under this article.[67]

Assuming this limitation to customary international law is maintained, this article may find application in the context of reviewing bureaucratic decision-making for fairness, objectivity, arbitrariness, and due process in areas such as the design and implementation of green power standards and requirements by

[65] *S.D. Myers Inc. v. Canada*, In a NAFTA Arbitration under UNCITRAL Arbitration Rules, Partial Award, November 12, 2000

[66] E.g., *Metalclad Corporation v.* Mexico, Award, International Center for the Settlement of Investment Disputes (Additional facility) Case No. ARB (AF)/97/1, August 30, 2000 from ICSID Review- Foreign Investment Law Journal, Spring 2001

[67] NAFTA Free Trade Commission, Interpretive Statement, July 31, 2001. This is available on NAFTA government web sites. Pursuant to Article 1131(2) of NAFTA, this statement is binding on future arbitration panels. Outside treaty obligations may be relevant, but only if they constitute part of customary international law as well.

individual states and provinces, and whether these have arbitrary impacts on foreign investors in that state. For example, a foreign investor in the distribution sector may try to argue that it is arbitrarily disadvantaged as compared to in-jurisdiction distributors that have associated generating facilities if only in-state sources may qualify as green production sources.

Performance requirements

NAFTA was one of the earliest investment agreements to include the prohibition of performance requirements imposed by host governments on a foreign investor. Performance requirements are specific operating parameters that an investor must meet to be allowed to establish itself. Prohibited performance requirements include, for example, requiring a certain percentage of domestic materials to be used in manufacturing a product, requiring a certain level of export of production, in particular to achieve foreign currency goals, using domestic technologies or mandating specific imported technologies, and requirements for certain levels of national management personnel. The intent of such obligations has been to free up a company to operate in the most economically efficient manner it can identify.

Key issues remain unclear as to the scope of this article today, each of which has a potential impact on the relevance of this provision to the electricity sector. In particular it will be important to determine whether the article applies to measures taken only at the time of establishment and that are specific to that investment, or whether it applies to any measure of general application that impacts the investment. A critical example of the relevance of this issue is whether general export and import related measures that are applicable to a foreign investor can constitute a prohibited performance requirements. Existing case law suggests that they can, but in practice there is no finding of a breach of Article 1106 to date.[68] If the prohibition on performance requirements is applied to any measure with an impact on exported or imported products or services (however one sees electricity) then any restriction on imports requiring certain levels of green power or of in-jurisdiction produced power may raise issues in this area.

Expropriation

Article 1110 of NAFTA has been perhaps the most controversial of the investment provisions in Chapter Eleven. International law on the expropriation of foreign property originally developed in response to wholesale expropriation or nationalization of such property. In time, it was expanded to include notions of creeping or gradual expropriation—measures that effectively strip an owner of the ability to manage or determine the fate of one's property but without actually changing the ownership or title.

Despite this expansion, international law traditionally remained directed at true deprivations of property. Today, a critical issue as to the scope of the expropriation provision of Chapter Eleven has been raised: does it go beyond such complete deprivations of property to require, as suggested in the *Metalclad* case, compensation for any government action which has a significant impact on the profit-making ability of an investment?[69] If the approach set out there is maintained, then any post-investment environmental

[68] E.g., see *S.D. Myers Inc. v. Canada*, In a NAFTA Arbitration under UNCITRAL Arbitration Rules, Partial Award, November 12, 2000, where it was decided that a measure could be covered by both other parts of NAFTA and by the obligations under Chapter 11. The tribunal ruled in that case that an export ban on PCB wastes from Canada did not constitute a performance requirement, while one of the three members issued a separate opinion arguing that it is so covered.

[69] *Metalclad Corporation v.* Mexico, Award, International Centre for the Settlement of Investment Disputes (Additional facility) Case No. ARB (AF)/97/1, August 30, 2000 from ICSID Review- *Foreign Investment Law Journal*, Spring 2001, para. 103-111. This approach also received some support in the *Pope & Talbot v. Canada* case, UNCITRAL Arbitration, 2000.

measure applied in the electricity generation and distribution sectors that impact on the profitability of a foreign investor will require compensation to be paid. This approach expands on the so-called takings doctrine in the United States, but takes it beyond any judicially accepted application seen prior to Chapter Eleven cases. There is considerable debate within the three NAFTA governments today as to the appropriate scope and interpretation of this article, and discussion on a further interpretive statement, initiated by the Free Trade Commission in July 2001, may lead to further clarifications.[70]

A different issue that may also have some relevance to the expropriation provision is whether the imposition of export quotas or controls may lead to claims of expropriation of a property right. One case at least has defined export markets as a property interest subject to protection under Chapter Eleven.[71] A quota that restricts this may, therefore, amount to an expropriation of that interest. It is not immediately clear whether export restrictions that meet the quotas and circumstances in Chapter 6, as outlined previously, could still be subject to challenge under Chapter Eleven by a foreign investor. If so, this could create a further constraint on the ability of governments to limit exports under conditions expressly applied in other parts of NAFTA.

[70] (quote statement with Chapter Eleven reference)
[71] *S.D. Myers v. Canada*, op. cit.

Annex One:

Committees and Working Groups of NAFTA

Listed below are the committees and sub-committees, working groups and sub-working groups and councils of NAFTA. There are 19 working groups and sub-working groups, 12 committees and sub-committees and 1 council.

Working Groups
Working Group on Rules of Origin (Chapter Five, Article 513)
Customs Subgroup (Chapter Five, Article 513.6)
Working Group on Tariff Rate Quota Administration (1999 NAFTA Commission)
Working Group on Grading and Marketing Standards (Chapter Seven, Annex 703.2.25)
Working Group on Agricultural Subsidies (Chapter Seven, Article 705.6)
Technical Working Groups on Sanitary and Phytosanitary Measures
Pesticides Technical Working Group (Chapter 7, Article 722(3)(e))
Animal Health Technical Working Group (Chapter 7, Article 722(3)(e))
Plant Health Technical Working Group (Chapter 7, Article 722(3)(e))
Meat, Poultry and Egg Inspection Technical Working Group (Chapter 7, Article 722(3)(e))
Dairy, Fruit and Vegetable and Processed Food Technical Working Group (Chapter 7, Article 722(3)(e))
Food Additives and Contaminants Technical Working Group (Chapter 7, Article 722(3)(e))
Veterinary Drugs and Feeds Technical Working Group (Chapter 7, Article 722(3)(e))
Fish and Fish Products Technical Working Group (Chapter 7, Article 722(3)(e))
Working Group on Emergency Action (Established by the Supplemental Agreement on Import Surges under NAFTA Article 2001 (2)(d))
Working Group on Government Procurement and Committee on Small Business (Chapter Ten, Article 1021)
Working Group on Investment and Services (NAFTA Commission Meeting, Jan., 14/94)
Temporary Entry Working Group (Chapter Sixteen, Article 1605)

Chapter 19 Working Group on Trade Remedies (Chapter 19 Article 1907.1)
COMMITTEES
Committee on Trade in Goods (Chapter Three, Article 316)
Committee on Trade in Worn Clothing (Chapter Three, Annex 300-B, Section 9.1)
Committee on Agricultural Trade (Chapter Seven, Article 706)
Advisory Committee on Private Commercial Disputes Regarding Agricultural Goods (Chapter Seven, Article 707)
Committee on Sanitary and Phytosanitary Measures (Chapter Seven, Article 722 and includes FTA Article 708 Working Groups)
Committee on Standards Related Measures (Chapter Nine, Article 913)
Land Transportation Standards Sub-Committee (Chapter Nine, Article 913.5(a)(i), Annex 913.5.a-1)
Telecommunications Standards Sub-Committee (Chapter Nine, Article 913.5(a)(ii), Annex 913.5.a-2)
Sub-Committee on Labelling of Textile and Apparel Goods (Chapter Nine, Article 913.5(a)(iv), Annex 913.5.a-4)
Financial Services Committee (Chapter Fourteen, Article 1412, Annex 1412.1)
Ad-Hoc Committee of Experts on Trade and Competition Policy (Chapter Fifteen, Article 1504)
Advisory Committee on Private Commercial Disputes (Chapter Twenty, Article 2022)
Council
Automotive Standards Council (Chapter Nine, Article 913.5(a)(iii), Annex 913.5.a-3)
Source: http://www.dfait-maeci.gc.ca/nafta-alena/contacts-e.asp

Annex Two:

Tariff Reduction on Capital Equipment

NAFTA introduced tariff reductions for capital equipment in the electricity sector. The most important tariff reductions involved Mexico's tariff schedules, since tariffs were already relatively low in Canada and the United States because of the FTA. Although there are several areas where tariff reductions are exempt, NAFTA also included provisions for zero tariff levels for environmental and pollution abatement equipment, in particular in Mexico's tariff schedules. Among the equipment categories that have been at zero tariff since NAFTA implementation are: systems that capture volatile substances in gas flows (packed columns, absorption and absorption columns), equipment for recovery of particulates from gas flows (e.g., electrostatic precipitators), devices to treat gas flows (e.g., burners and NO_x-reducing equipment) as well as various measuring and monitoring equipment.

The chart below provides some information on actual tariff rates as of 2000, both for major categories involving electric power generation, and end-of-pipe pollution abatement equipment for electric power generation. [72]

	Canada		Mexico		United States	
	Pre-NAFTA	Post NAFTA	Pre-NAFTA	Post NAFTA	Pre-NAFTA	Post NAFTA
Electrical Energy	0%	0%	10%	0%	0%	0%
Gas Turbines	10%	0%	10%	0%	5%	0%
Steam Turbines	10%	0%	10%	0%	7.5%	0%
Wind Generators	2.5%	0%	2.5%	0%	3%	0%
Photovoltaic	0%	0%	10%	0%	4.2%	0%
Pollution Control	2.5%	0%	10%	0%	3.9%	0%

72

HS Codes Used in Tariff Analysis			
	Canada	United States	Mexico
Electrical Energy	27160000	27160000	27160001
Gas Turbines	84118190	84118180	84118199
Steam Turbines	84061900	84061910	84061900
Wind Generators	85424000	85424000B	85024000
Photovoltaic	85414090	85414095	85414093
Pollution Control	84213990	84213900 B, C	84213909, 84213999
NAFTA Tariff Schedules found at http://www.economia-snci.gob.mx/tratados/anxtlcan/anxtlcan.htm and accessed on 16 October 2001.			