

# **ELECTRICITY SERVICES IN THE GATS AND THE FTAA**

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## **INTRODUCTION**

International trade agreements are reshaping economies around the world by allowing freer flow of investments, goods and services. Energy and electricity products have the particular characteristic of ranging over both good and service classifications. How is electricity, in particular, treated within these trade agreements, which clearly distinguish between goods and service sectors? How can the electricity sector be affected by new agreements? We answer these questions with a specific focus on the Free Trade Area of the Americas (FTAA). We start in section 2 by setting the international trade context and then study, in section 3, how electricity is considered in the General Agreement on Trade in Services (GATS), in the North American Free Trade Agreement (NAFTA) and in the FTAA. An analysis on the possible consequences of the FTAA on the electricity sector is made in section 4.

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## 1. THE INTERNATIONAL TRADE CONTEXT

The FTAA negotiations bring together the 34 democratic countries of the Western Hemisphere.<sup>1</sup> They all agreed in the 1994 Summit of the Americas to negotiate the integration of their economies in a single free trade area. All countries are members of the World Trade Organization (WTO). Because the FTAA will mostly prevail over previous local trade and integration agreements, we focus our attention on it. But before presenting the FTAA, we provide in the following sections some background information on the WTO's General Agreement on Tariffs and Trade (GATT) and GATS and on the NAFTA, because they set an important context for the FTAA.

### 1.1 THE WTO: GATT AND GATS

As international trade increased after the 1947 GATT and expanded beyond goods, for which the GATT was designed, the need for an international body overseeing all trade issues (negotiations and disputes in all sectors) was being felt worldwide. The Uruguay Round of Multilateral Trade Negotiations (usually simply referred to as the "Uruguay Round") took place between 1986 and 1994 among signatories of the original GATT. It led to the creation of the WTO, in 1995, the institution dealing with international trade issues. Along with the creation of the WTO, the results of the Uruguay Round were an update of the GATT<sup>2</sup> and the creation of the GATS, to set the ground for trade in services as well as for further liberalization in these sectors. Other agreements reached at the end of the Uruguay Round deal with Trade-Related Aspects of Intellectual Property Rights (TRIPS), dispute settlement, trade policy review mechanism and plurilateral agreements. A new "round" of WTO negotiations started in 2001, called the Doha Development Agenda, after a conference in Doha (Qatar). It covers many trade issues, such as agriculture, services and electronic commerce, among others (see WTO, 2001a, for all areas and more details on the content of the negotiations).

The GATS is built on the same principles used in the GATT, but applied to service sectors. It represents an international effort to develop a global *multilateral trading system* in services, as opposed to specific *regional agreements* among different countries, leading to regional free

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<sup>1</sup> "Western Hemisphere" is the expression used in the FTAA negotiations to designate South, Central and North America, along with the Caribbean. Only Cuba does not take part in the negotiations.

<sup>2</sup> There is now a "GATT 1994" that is the updated version of the "GATT 1947". See the Annex 1A of WTO (1994).

trade integration, but also to differently integrated groups of countries, such as the European Union, Mercosur or NAFTA.<sup>3</sup> The GATS does not dictate liberalization in services, but sets a framework on how liberalization of trade in services should be done, with a schedule of commitments each country submits and has to follow.<sup>4</sup> Hence, the GATS only applies to sectors in which member countries make commitments. Three important principles in the GATS define the backbone of this framework:<sup>5</sup> (1) Most Favored Nation (MFN) treatment; (2) market access and (3) national treatment. Transparency in regulation and information is also an important principle (article III of the GATS).

The MFN treatment principle (article II) compels member countries to treat service providers from all countries as well as the foreign service provider that has the most favored treatment. This means that if a country has specific rules that favor a service provider from another country, then these rules should apply to all service providers, without discrimination with respect to their country of origin. However, to limit the scope of MFN, a list of exemptions can be submitted by each country, to exclude some sectors from the MFN requirement (see article II.2 and Annex on article II Exemptions).

The two other principles, market access (article XVI) and national treatment (article XVII), apply only to sectors that countries voluntarily want to liberalize. In such a case, they list the liberalization commitments they want to make for each sector of their choice. This list is called the "Schedule of Specific Commitments" and is defined in article XX.

The market access principle spells out six different types of limitations that a country cannot use to prevent a service supplier to operate in its territory (article XVI, 2a to 2f). The six forbidden types of limitations are limitations on:

- the number of suppliers in the market (in any possible manner);
- the value of transactions or asset values of the supplier;
- the quantity of services offered by suppliers;

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<sup>3</sup> See OECD (1995) for more on the distinctions between multilateral trading systems and regional agreements.

<sup>4</sup> Commitments are made for specific sectors and for different *modes of supply*. Services are categorized into four different modes of supply (GATS, article I.2). The supply of a service from a *provider* in one country to a *consumer* in another country can be made through: **Mode 1** - Cross-border (only the service "travels"); **Mode 2** - Consumption abroad (the consumer travels); **Mode 3** - Commercial presence in the consuming country (the provider has a permanent commercial presence abroad); or **Mode 4** - Presence of natural persons (staff of the provider travels to the point of consumption).

<sup>5</sup> See WTO (1999) for a complete introduction to the GATS.

- the number of employees of the suppliers;
- the legal status of suppliers that can provide services;
- the amount of foreign ownership in the supplier's capital.

Finally, the national treatment principle simply states that foreign suppliers should be treated in exactly the same way as national suppliers.

In summary, rather than directly opening the service sectors to international competition, the GATS sets a common backdrop for future liberalization in the service industries. With its "positive listing" approach (a sector has to be explicitly mentioned as a country commitment to liberalization to be subject to international trade), rather than mandatory liberalization, signatory countries can decide on their own specific pace of progress.

## 1.2 THE NAFTA

The NAFTA was signed in 1994 between Mexico, the United States of America and Canada to implement free trade in goods and service sectors, in an area covering the three member countries.<sup>6</sup> It differs from the GATS in the way sectors are subject to liberalization, removal of trade barriers and absence of governmental favorable treatment. Under NAFTA, all goods and service sectors from the member countries are subject to international competition without restrictions. Countries do not have to "commit" themselves in the sectors of their choice. The same principles of MFN, market access and national treatment are found in this agreement.

However, although NAFTA may first appear to be all-inclusive, its structure conveys a lot of distinctions among sectors. This limits the scope of influence of NAFTA to some sectors, and excludes some strategic sectors from international competition. Also, in some instances, it avoids the need to introduce regulatory reforms to eliminate protections provided by national laws. The main sectors benefiting from a special treatment under NAFTA, and for which a specific chapter has been written to exclude them from the general rules defined otherwise, are Energy (Chapter 6), Agriculture (Chapter 7), Telecommunications (Chapter 13), Financial services (Chapter 14) and Cultural industries (Chapter 21, Annex 2106).

Other less important reservations exist, as specified in the Canadian, US and Mexican schedules of Annex I, and also in other chapters and annexes. These reservations specify special treatment under NAFTA for sectors such as fisheries, transportation (especially air transportation) and others.

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<sup>6</sup> The text of NAFTA and more information on the agreement can be found at the NAFTA Secretariat's web site: [www.nafta-sec-alena.org](http://www.nafta-sec-alena.org)

Furthermore, Annex III contains some limits of the applicability of NAFTA in some sectors, with a list of "Activities Reserved to the State". Although this annex is presented as applying to the three member countries, only Mexico has a schedule of activities that are under the exclusive power of the state. For instance, the government of Mexico has retained the right to provide all energy goods and services to the population (petroleum, electricity, nuclear power), as well as for some other sectors, such as postal service or railroads. Canada and the US do not have such power under NAFTA.

NAFTA is therefore a significant step forward in terms of trade liberalization of goods and services for the three member countries. It goes beyond the GATT and the GATS, because it automatically includes almost all sectors in the created free trade area, which is the world's largest one. However, with numerous chapters on specific sectors and many annexes spelling out restrictions to free markets and international trade, NAFTA is far from being the ultimate stage of liberalization.

### 1.3 THE FTAA

The negotiations for the Free Trade Area of the Americas<sup>7</sup> (FTAA) started in December 1994 with the First Summit of the Americas in Miami.<sup>8</sup> The goal of the negotiations is to sign an agreement by January 2005, in order to have a free trade area into force by December 2005. This regional agreement builds from the GATT, GATS and NAFTA in the sense that it is consistent with both WTO agreements, but without a generalized positive listing approach. A second draft of the agreement was released in 2002 (see FTAA, 2002) and this draft constitutes the basis of our analysis. A negative listing approach is used in the FTAA, as in NAFTA: sectors have to be excluded to avoid coverage by the agreement. It also takes into considerations other regional agreements.<sup>9</sup>

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<sup>7</sup> The Spanish name for the FTAA is *Área de Libre Comercio de las Américas* (ALCA), the Portuguese one is *Área de Livre Comércio das Américas* (ALCA) and the French one is *Zone de Libre-Échange des Amériques* (ZLÉA).

<sup>8</sup> The Second Summit of the Americas was in April 1998 in Santiago (Chile), the Third was held in Quebec City (Canada) in April 2001. Many other Ministerial meetings and Negotiating Group meetings (from the 9 different negotiating groups) have been held more frequently (see FTAA, 2003, for more details).

<sup>9</sup> FTAA's chapter 1, article 4 on Application and Scope of Coverage of Obligations establishes that the FTAA "shall co-exist with bilateral and subregional agreements, and does not adversely affect the rights and obligations that one or more Parties may have under such agreements, to the

However, a slightly different negotiation approach is adopted in the FTAA, compared to NAFTA. Goods and service sectors are dealt with in a very inclusive manner, with little mention of specific sectors and exclusions to the agreement. Exceptions are mainly limited to agriculture (the only specific sector for which a chapter is devoted), air transport (that is simply not affected by the FTAA) and governmental activities and services. This being said, the same principles found in the GATS and NAFTA are used again: MFN treatment, market access and national treatment. In chapter 8 on services, however, the possibility for countries to have a “list of specific commitments” is introduced.<sup>10</sup> This would lead to an approach similar to the GATS “positive listing” approach in the service sector if the countries agree in the negotiations on this principle.

However, this concept of a list of commitments, as spelled out in the current draft agreement (FTAA, 2002), is introduced much less formally than in the GATS, where the third part is specifically devoted to commitments (articles XVI to XVIII of the GATS). In the FTAA, the mention of this list of commitments is relegated to a section that is not even an article in the current version, and which still has an unclear interpretation.

The key innovation of FTAA is therefore to include almost all sectors in the liberalization process, leading –if negotiations were successful– in an immense region of free trade where almost all economic activities will have to be opened to international competition, with a level playing field in each country guaranteed by the MFN treatment, market access and national treatment principles.

## 2. ELECTRICITY IN TRADE AGREEMENTS: A GOOD OR A SERVICE?

To see how Western Hemisphere electricity sectors could be affected by the FTAA, it is important to understand how the different products involved in the electricity supply are defined in the different trade agreements in terms of *goods* or *services*. We first present how electricity is classified in the main international product classification systems, covering different types of goods (commodities) and services. In the following sections, we analyze how the GATS, NAFTA and the FTAA treat electricity.

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extent that such rights and obligations imply a greater degree of integration than provided for [in the FTAA]” (4.3).

<sup>10</sup> For the specific paragraphs on this list of specific commitments, see the Section on other issues related to the above (“the above” being the eight articles of the chapter 8 on services), page 8.24 of FTAA (2002).

## 2.1 INTERNATIONAL CLASSIFICATION SYSTEMS

The Statistics Division of the Department of Economics and Social Affairs of the United Nations maintains a list of international family of economic and social classifications.<sup>11</sup> Among the different types of classifications, the different product classifications help understand how different products are included in trade agreements. For instance, the 1947 GATT is an international agreement on goods, not explicitly including – nor excluding– electricity. This is paralleled by the fact that the Harmonized Commodity Description and Coding System (HS)<sup>12</sup> does not strictly include electrical energy as a good (it is *optionally* considered as such in this system, see Table 1). Indeed, as reported in WTO (1998), the GATT was never comprehensively applied as a framework for international electricity trade, simply because the non-storable nature of electricity did not lead to its inclusion in the commodity category. As an illustration of the little relevance of the GATT to the electricity sector, see Plourde (1990) where energy implications of the GATT and the 1987 Canada-United States Free Trade Agreement are discussed, with very little impact on the electricity sector (access to transmission lines being an exception).

The place of electricity in different service classification systems is also unsatisfactory. Indeed, the WTO Services Sectoral Classification List (referred to as “W/120” see WTO, 1991) does not include electricity. As the relevant section of the W/120 list shows (see Table 1) only “services incidental to energy distribution” are considered as services, and this would exclude most of the electricity sector (from production to distribution). The complexity of the electricity sector, involving a vast range of different intermediate products, is probably well demonstrated by the four different sections and many subclasses in which electricity-related products are listed in the Central Product Classification<sup>13</sup>, as presented in Table 1.

<sup>11</sup> See the paragraph *International Economic and Social Classifications* in the web site <http://unstats.un.org/unsd/methods.htm>

<sup>12</sup> The Harmonized Commodity Description and Coding System (HS) is maintained by the World Customs Organization. A 6-digit code is attributed to about 5,000 commodity groups. HS was agreed on in 1983 and is a modification of the 1950 Convention on Nomenclature for the Classification of Goods in Customs Tariffs. The goal of HS is to facilitate the identifications of internationally traded commodities for customs tariffs and statistical purposes.

<sup>13</sup> The Central Product Classification (CPC) is under the responsibility of the United Nations Statistics Division. It is based on the HS, but is broader because its categories are mutually exclusive and exhaustive and cover all goods, services and even certain types of assets (HS is only for goods). CPC allows 65,610 possible categories to be defined, through 10 sections, 71 divisions, 294 groups, 1,162 classes and 2,093

Table 1. Product classification systems

<b>Systems</b>	<b>Position of electricity in systems' hierarchy</b>	<b>Explanation</b>
<i>Harmonized Commodity Description and Coding System, (HS, 2002)</i>	<b>Chapter 27</b> Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes <b>2716.00</b> Electrical energy (optional heading)	This system only classifies goods. Electrical energy is included only optionally, its nature as a good or service being ambiguous.
<i>WTO Services Sectoral Classification List (1991) W/120</i>	<b>1. BUSINESS SERVICES</b> <b>F. Other Business Services</b> <b>j. Services incidental to energy distribution</b>	This list contains 12 sectors of services and reflects the fact that energy services were not discussed in the Uruguay round.
<i>Central Product Classification (CPC Version 1.1 2002)</i>	<b>Section: 1</b> - Ores and minerals; electricity, gas and water <b>Division: 17</b> - Electricity, town gas, steam and hot water <b>Group: 171</b> - Electrical energy <b>Class: 1710</b> - Electrical energy <b>Subclass: 17100</b> - Electrical energy <b>Section: 5</b> - Construction services <b>Division: 54</b> - Construction services <b>Group: 546</b> - Installation services <b>Class: 5461</b> - Electrical installation services <b>Subclass: 54611</b> - Electrical wiring and fitting services <b>Section: 6</b> - Distributive trade services; lodging; food and beverage serving services; transport services; and utilities distribution services <b>Division: 69</b> - Electricity distribution services; gas and water distribution services through mains <b>Group: 691</b> - Electricity distribution services and gas distribution services through mains <b>Class: 6911</b> - Electricity transmission and distribution services <b>Subclass: 69111</b> - Transmission of electricity <b>Subclass: 69112</b> - Distribution of electricity <b>Section: 8</b> - Business and production services <b>Division: 85</b> - Support services	The products related to the electricity industry are in many different sections of goods and services.

subclasses. The code numbers in CPC consist of five digits. The final draft of the CPC (or Provisional CPC) appeared in 1989, version 1 in 1997 and version 1.1 in 2002.

	<p><b>Group: 859</b> - Other support services  <b>Class: 8599</b> - Other support services n.e.c.  <b>Subclass: 85990</b> - Other support services n.e.c.  (including reading of electric, gas, and water meters)  <b>Division: 86</b> - Services incidental to agriculture,  hunting, forestry, fishing, mining, and utilities  <b>Group: 863</b> - Services incidental to electricity, gas,  and water distribution  <b>Class: 8631</b> - Services incidental to electricity  <b>Subclass: 86311</b> - Electricity transmission services  (on a fee or contract basis)  <b>Subclass: 86312</b> - Electricity distribution services (on  a fee or contract basis)</p>	
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The ambiguity on electricity products in classification systems is a real problem for further advances of trade in electricity service sectors, a problem that may be resolved in current GATS negotiations.

## 2.2 ELECTRICITY IN THE GATS

The text of the GATS specifies that this agreement covers “any service in any sector except services supplied in the exercise of governmental authority” (Article I, 3b). Governmental services are further restricted to “any service which is supplied neither on a commercial basis, nor in competition with one or more service suppliers” (Article I, 3c). However, electricity supply and the electricity sector in general are not considered to be subject to the GATS. This comes from the ambiguity mentioned previously on the nature of the “electricity product” and is formalized in the GATS structure by the absence of almost all energy services from the W/120 list (only the limited “Services incidental to energy distribution” are included). This explains why there is only a limited literature on how the GATS could affect the electricity sector. Griffin Cohen (2001), which provides a Canadian perspective on the issue, is among the few publications on the topic. In this section, beyond reporting on the position of electricity in the GATS, we review how negotiations that have followed the signature of the GATS in 1994 could include the electricity sector in the future.

In a Background Note on Energy Services (WTO, 1998), a general portrait of energy services in the GATS is provided. It describes how liberalization could take place in a GATS framework, with some indications on how energy is treated in other free trade agreements. It points to the need to clarify how energy and electricity services are classified, as goods and/or services. Consequently, this theme is part of the

new Doha-GATS-WTO negotiations that started in 2000.<sup>14</sup> The energy sector is indeed included as a specific sector in which countries want be able to make specific commitments. Chile, the US and other countries have explicitly expressed their desire to see the energy sector included. In their position, stated in WTO (2000a and b), the US ask to explicitly include energy services in the W/120 list, to allow all countries to reap the benefits of liberalization, as it is argued. For its part, Chile in WTO (2001b) calls for a much broader inclusion of types of services in the GATS, including energy services, but also air transport services. Other proposals by the European Union (WTO, 2001c), Japan (WTO, 2001d) and Venezuela (WTO, 2001e) also support the inclusion of energy services in the GATS negotiation agenda and a renewed classification for energy products.

With this background, a Negotiating Proposal on Energy Services (WTO, 2002) has been put forth, setting a basis for the new round of negotiations. The global goal is of course to fully bring this sector under the GATS in order to favor more liberalization, but some willingness to “guarantee the right of developing countries to regulate and handle the supply of energy services in their territories in order to meet their domestic policy objectives” is also mentioned (paragraph 5 of WTO, 2002). As negotiations occur, the extent to which the energy and electricity sectors are included in the GATS should be determined by January 2005, the scheduled deadline. Annex 1 to this paper lists the breakdown of energy services in different sub-sectors, as proposed by Venezuela in WTO (2003f). If this list was agreed upon, it would imply that member countries would progressively make market access and national treatment commitments in each of the identified sub-sector.

### 2.3 ELECTRICITY IN THE NAFTA

Electricity, as an energy product, receives in NAFTA a similar treatment to the one it had in the 1987 Canada-US Free Trade Agreement (FTA), in the case of Canada and the US. Mexico, however, has reserved for itself a very different treatment. This section provides a presentation of the place of electricity in NAFTA, using the text of the agreement (Government of Canada et al., 1994) and research papers on NAFTA and the energy sector (Plourde, 1993, Watkins, 1993, Horlick, Schuchhardt and Mann, 2002, and Bradley and Watkins, 2003).

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<sup>14</sup> Although the Doha Development Agenda only started in 2001, sector negotiations had already begun and were included in the Doha declaration (WTO, 2001a).

The characterization of electricity as a good in NAFTA draws on the Canada-US FTA, GATT and HS classification of goods. This treatment of electricity as a good tends however to exclude from the agreements the service sub-sectors associated to electricity supply. Indeed, NAFTA acts essentially as a trade and investment promotion tool for goods in this sector, not pressuring the energy service sectors to further liberalize. What follows describes the situation for Canada and the US, as Mexico excluded itself from these provisions through annexes 602.3 and III. In the case of Mexico, the state remains the dominant market regulator and actor, even if some private investment and energy trade are partially authorized.

Under normal circumstances,<sup>15</sup> no quantitative or price restrictions in trade in energy can be imposed by the countries, but a system of import and export licenses can however be used (article 603) to regulate –to some extent– energy exchanges. In practice, however, these licenses have never been binding. Trade and investment in electricity are therefore open to US and Canadian companies in both countries, but serious *de facto* limitations characterize the electricity sector through the presence of state monopolies in many American States and Canadian Provinces. Articles 1502 and 1503 on Monopolies and State Enterprises indeed maintain the right of governments to establish, designate and authorize monopolies and state enterprises in any sector, as long as other NAFTA requirements are respected. In the case of electricity, this allowance of state enterprises and monopolies leaves all states and provinces with the ability to heavily regulate the electricity sector, granted that electricity trade with other jurisdictions and investment are conducted according to NAFTA rules.

In effect, NAFTA has changed little of the electricity sector, first because no new obligation was introduced from the Canadian-US FTA and, second, because Mexico excluded itself from a similar agreement. A few jurisdictions have however taken the initiative to liberalize their electricity sector, the infamous examples being the state of California and, in Canada, the provinces of Alberta and Ontario.

#### **2.4 ELECTRICITY IN THE FTAA**

As the FTAA is still under negotiations, any analysis is limited by the fact that no definitive document is available. However, a second draft of the agreement is available (FTAA, 2002) and initial principles have been

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<sup>15</sup> Extraordinary circumstances, defined in article 607 of NAFTA, are essentially national security measures. They allow countries to restrict exports.

laid out, where consistency with the “rules and disciplines of the WTO” is adopted.<sup>16</sup>

The general approach of the FTAA is to make no a priori exclusions of services in the negotiations. The excellent background paper on services made by CEPAL (1998) has been used in the preparation of the FTAA. This document, presenting the complexity of defining a service through an academic literature review of its definition, examines the principles on which liberalization can be introduced in this sector and possible impediments to market access.

Following a broad, inclusive, sectoral approach, no explicit mention of electricity and energy products, as goods or services, is therefore made in the second draft of the FTAA. This means that, a priori, all electricity goods and services will be treated exactly as any other goods and services, as long as they are defined as good and service sectors at the WTO level. As we have seen in section 3.2, current WTO negotiations aim at including all energy services within the scope of the GATS, but it may not be the case if negotiations on energy services fail. On the following analysis, we use the assumption that energy services are included in the WTO W/120 list of services covered by the GATS.<sup>17</sup>

Under the FTAA, enforcement of MFN treatment, market access and national treatment would be guaranteed for all service providers of all signatory nations in all electricity service sectors, unless countries decided to mitigate the application of these principles by using some exemptions. The *non*-distinct treatment of the electricity (and energy) sector is at variance with NAFTA (that excludes it from the full scope of the agreement through a dedicated chapter). However, some other sectors receive a distinct treatment in the FTAA: agriculture, many social services, financial services, air transport services and some other smaller sectors (which are excluded from the coverage of chapter 8 on services in article 1.2).

Beyond these sectors, the FTAA will most probably also contain different provisions to protect specific sectors that some countries may not want to see opened to international trade and investments, with full MFN treatment, market access and national treatment. Table 2 presents the draft FTAA articles that could directly be applied to the electricity sector to exempt it from FTAA coverage.

<sup>16</sup> The principles of negotiation can be found in the yearly Ministerial Declaration of the 34 participating countries, since 1995, at [www.ftaa-alca.org](http://www.ftaa-alca.org) or in chapter 1, article 3 on Principles, in FTAA (2002).

<sup>17</sup> This assumption seems reasonable, as countries such as Venezuela and Cuba made proposals for including energy services in the W/120 list. See WTO (2001e), (2002) and (2003f).

**Table 2: Draft FTAA articles leading to possible exemptions in the electricity sector**

<b>FTAA chapter</b>	<b>Article</b>	<b>Description</b>
<b>1. General &amp; Inst Issues</b>	13.1	Some special sector treatment could be permitted due to differences in the levels of development between countries.
<b>4. Investment</b>	1.3 a) to c)	Economic activities reserved by countries on Annex XX (unfound in the draft) or for national securities reasons. Parties may exclude investment in certain sector (easier to do for smaller economies)
	12.1	Some exempted sectors may be listed in this article.
	12.2	Some principles [national treatment, MFN, performance requirements...] may not apply to some sectors listed in an annex.
	12.3	MFN does not apply to some sectors listed.
	12.9	Smaller/developing economies can maintain reservations in sensitive sectors.
<b>5. Market Access (for goods)</b>	4.10	(page 5.3) Smaller/developing economies can benefit from more favorable tariff elimination conditions.
	p. 5.16-5.17...	Temporary safeguard measures.
<b>8. Services</b>	1.7	For smaller/developing economies there shall be flexibility in meeting the commitments of this chapter.
	1.8	Comprehensiveness of the coverage shall be linked to the extent and rate at which the modes of supply for the provision of services are liberalized
	1.9	No provision of this Chapter shall be construed to prevent a Party from having the right to regulate and to introduce new regulations to achieve domestic policy objectives.
	2.3	Smaller/developing economies can list exemptions to MFN treatments.
	5.1	Positive/negative listing has to be decided for national treatment.
	5.6	Smaller/developing economies can list exemptions to national treatments.
	8	Definition of service exclude "other activities conducted by a public entity for the account of or with the guarantee or using financial resources of the government".
	p. 8.17	"sectors in which commitments are undertaken": this leaves the door open for countries to <i>not</i> commit some sectors to MFN treatment, market access and national treatment.
	p. 8.24	List of specific commitments (for market access and national treatment)
	page 8.24	Reservations of MFN treatments / Non-conforming measures.
<b>10. Competition Policy</b>	2.2	Parties have the right to designate and maintain a monopoly.

The information in Table 2 leads to at least three *preliminary* conclusions on possible exemption strategies. The emphasis is put on preliminary because all these articles are still under negotiation, and may or may not be included in the final version of the FTAA. The first preliminary conclusion is that developing countries will benefit from specific favorable conditions when adopting the FTAA. Second, national regulation and monopolies will have some protection. And third, without using “developing countries protection measures” or monopoly provisions, countries will be able to exempt some sectors from the application of the FTAA, or even to avoid committing some sectors (as in a positive listing approach). We now discuss each of these three preliminary conclusions in greater details.

First, the level of development and the size of countries are factors that could be used to justify some exemptions to the application of some of the FTAA principles. For instance, article 13.1 of chapter 1 announces that these reasons could be used to obtain special and differential exemptions. However, this would likely be decided on a case-by-case basis, leaving aside broader or collective treatments. In chapter 4 on investment, the article 12.9 opens the door to small countries to prevent foreign investors from entering some sectors, in order to achieve “national development objectives”. Similarly, chapter 5 on market access (article 4.10) establishes the possibility to have more favorable tariff elimination conditions, and consequently a greater protection in some sectors. In chapter 8, a series of articles grants special rights to developing countries. Article 1.7 mentions more flexibility in the commitments made by these countries. Article 1.8 makes sure that a special attention is given to the current level of liberalization in service sectors in the scope of coverage of the three principles. Article 2.3 may lead to more exemptions from MFN treatment and article 5.6 provides similar exemptions from national treatment. For market access, however, no such article is written to limit its application in developing countries.

Second, regarding national regulation and monopolies, some limited protection could come from chapter 8, article 1.9. This article establishes for all countries the right to regulate and to introduce new regulation. Of course, the exercise of this right has to be compatible with the rest of the agreement. In chapter 10, article 2.2 provides some guidance on how legal monopolies can be maintained and even created. A related article 2.4 on State Enterprises offers some guarantees that the FTAA would not force countries to privatize. However, chapter 10 on competition policy and the whole agreement itself are designed to promote free competition and private economic agents, so the articles mentioned in this paragraph only have a limited ability to protect specific market regulation and monopolies.

Finally, third, for all countries, an exemption list can be used (as in a formal negative listing approach) for some sectors and for some principles.

On investment, chapter 4, articles 1.3 and 12.1-3 protect the right of countries to exclude some sectors, hence limiting the access of foreign investors in these economic activities. Market access can also be avoided in some cases, through articles 5.16-17 in chapter 5, to protect some sectors. These articles are labeled “safeguard measures”, and no indication is yet given on when they could be applied. In any case, these measures are only temporary. In the service sectors, chapter 8, article 5.1 states that either a list of exemptions or a commitment list would be created for the application of national treatment. Further exemptions of some service sector could come from the definition of a “service supplied in the exercise of governmental authority” (article 8 on definitions), although little room for interpretation is likely to remain as the WTO’s W/120 list of services should prevail. In pages 8.17 and 8.24 of the draft FTAA text, principles about lists of commitments are mentioned (as in a formal positive listing approach). However, these mentions are not given any article number, and are in a section called “section on other issues related to the above”. This illustrates –one could argue– the little interest negotiating countries (or their negotiators) have in adopting a positive listing approach. If it had been the case, the positive listing approach would have been defined more explicitly in an earlier article.

The articles presented in Table 2 could therefore allow the signatory countries to exempt parts of the electricity sector from the FTAA, even if no particular treatment for electricity and energy has been included in the design of the agreement. The first exemption strategy would be to use articles related to the stage of development of the country. The second strategy would be to use the country’s right to regulate and to have monopolies. Finally, the third strategy would be more straightforward, by simply using the possibility of exempting a sector from the FTAA.

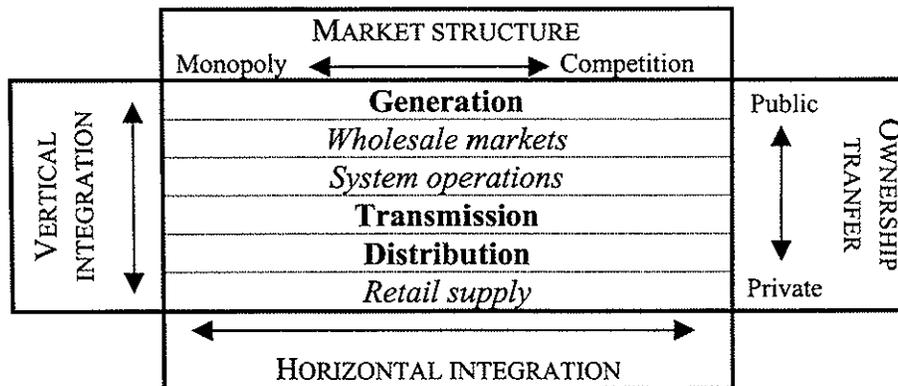
However, the main negotiating trend in trade agreements, in general and in this one in particular, is to treat the energy/electricity sector no differently than other goods and service sectors. This would introduce difficulties for countries reluctant to open this sector to international trade and investment. Even in the presence of some provisions allowing exemptions to be defined and specific commitments to be made, in the long run, the same coverage is very likely to apply to all sectors. Exemptions will have to be regularly justified to be maintained, and are presented only as temporary measures, until “further liberalization” is made. Indeed, specific commitments have to be broadened over the years, and this will have to include all electricity sector goods and services, at least if the objectives adopted in the FTAA and GATS negotiations are

kept the same: “to enhance competition and improve market access” (FTAA, chapter 1, article 2.c) and reaching “the early achievement of progressively higher levels of liberalization of trade”.<sup>18</sup>

### 3. POSSIBLE IMPACTS ON THE ELECTRICITY SECTOR

The electricity sector is a multiplayer industry with many different sub-sectors, as Annex 1 clearly illustrates. Figure 1 displays these sub-sectors in a less detailed, but more common manner, along with the four types of reforms that can be undertaken: (1) Ownership transfer (between different types of public and private ownerships); (2) Market structure change (from monopoly to competition or vice-versa); (3) Vertical integration or de-integration (or unbundling) and (4) Horizontal integration or de-integration.

**Figure 1. The electricity sub-sectors and the four types of reforms**



Objectives of the GATS and FTAA are to foster trade and international investment in all sectors, preferably in a competitive environment, to support economic growth and prosperity. The main tools used to reach these goals are the three principles we have presented in section 2: MFN treatment, market access and national treatment. To these, transparency and competitiveness should also be added because they are central elements of these agreements.<sup>19</sup>

<sup>18</sup> Introduction to the GATS, in the Annex 1B of WTO (1994).

<sup>19</sup> See FTAA (2002) chapter 1, article 2.c for competition and article III of the GATS for transparency.

Since a definitive electricity sector classification has not yet been agreed on at the WTO level, some ambiguity remains on which sub-sectors will fall under the scope of the FTAA. However, as the agreement is very inclusive and does not separately consider the electricity sector, the assumption should be that the whole sector would be covered by the agreement. Consequently, the six sectors presented in Figure 1 should not receive any a priori exemption from FTAA coverage, and could only be excluded if it is authorized to exclude them from the application of the three guiding principles. Furthermore, if retail supply of electricity is considered to be a distinct sub-sector from distribution in the sector classification (as in Figure 1 and in the Appendix 1), then pressure to apply the principles distinctively in the two sectors (distribution and retail supply) will be felt, opening the way to more unbundling of the sector.

The FTAA, and the underlying GATS, cannot directly dictate changes in the competition level of a sector, but rather could prompt the implementation of the three principles, depending on the extent to which the sector is covered by the agreement. They can also make pressure to increase the level of transparency and competitiveness in the different sectors covered. We analyze in the following how each principle would affect the six main sub-sectors of the electricity sector, if all FTAA principles were fully applied, without any exemption. Again, it should be clear that this is an “extreme scenario” analysis, made under the assumption that in the long run the electricity sector will not be exempted from the full scope of the guiding principles of the FTAA. Table 3 summarizes the analysis.

### **3.1 MFN AND NATIONAL TREATMENT**

The MFN treatment in energy services would give to investors from all FTAA member countries the best treatment provided to some countries before the implementation of the FTAA. This would widen possibilities of investors to access foreign electricity sub-sectors. Current rules that now apply under NAFTA or in Andean Community in energy services would have to be extended to all countries of the Americas. Companies from any member country could be involved in all sub-sectors as long as this right has already been given to some countries. No restrictions specific to some countries could be implemented in their rights to operate.

The national treatment principle goes further than the MFN treatment and grants all national privileges to foreign companies. This makes any national sub-sector exclusivity impossible to achieve without getting an exemption from national treatment. Current Mexican exemptions, reserving to the Mexican state the right to be involved in almost all aspects

of the energy sector (under NAFTA), would not be compatible with national treatment.

### 3.2 MARKET ACCESS

The market access principle would be one influencing the most all electricity sub-sectors. In a majority of jurisdictions in the Americas, electricity services are still provided by integrated monopolies that have exclusive access to their market. Implementing market access in the electricity sub-sectors would mean granting the right to any company to be involved in generation. Producers, marketers and all consumers should then have access to the wholesale market, which would consequently have to be a public market. Furthermore, an institution without any specific privilege should operate this market. In other terms, electricity could not be traded in any exclusive institution (such as in a unique spot market).

Concessions for sub-sectors that are still considered to be natural monopolies should be opened for tenders on a regular basis. That implies that systems operations, transmission and distribution should not only be opened to free and non-discriminatory access, but that investment and operation in these sub-sectors should be regulated in a non-discriminatory manner. At the retail level, market access will ensure that no exclusive seller has the privilege to supply electricity. Final consumers should be accessible to any firm (distributor, generator or marketer) wishing to sell electricity to them.

The market access principle would therefore oblige jurisdictions to create independent transmission companies with independent wholesale market operators and an independent systems operator. A fully open retail sector would have to be implemented. These changes would be very important changes for most Western Hemisphere jurisdictions.

### 3.3 TRANSPARENCY AND COMPETITIVENESS

Transparency requirement under the GATS and the FTAA would increase the accessibility of information to the firms and the public. Some technical information on generation, transmission and distribution, along with commercial information (price, some customers information, contracts) would have to be made public, up to some degree of confidentiality. This would require many jurisdictions to upgrade their information systems and to release more information.

Finally, competitiveness will make national policy tools involving direct subsidies, tax exemptions, high depreciation rate or low water right costs<sup>20</sup> more difficult to implement. The chapter 6 of FTAA (2002) deals

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<sup>20</sup> The use of water is not always priced according to market principles. This situation could change with the creation of tradable water permits, were the

with subsidies and the possibility to implement countervailing measures, opening the way to a harmonization of all production conditions in member countries, especially in terms of fiscal and regulatory environments. Indeed, if no such harmonization takes place, trade disputes related to accusations of dumping or unfair subsidies will become more common. In the wholesale and retail markets, competitive prices will require a spot market, where hourly market price references are defined. Regulated contracts and price controls, currently used in almost all FTAA negotiating countries, would have to be terminated under the strict application of these principles. Competitive tenders would also have to be organized in sub-sectors still being considered as natural monopolies. This could ensure a competitive behaviour in these sub-sectors, as shown for instance in Demsetz (1968), a classical utility economics paper.

**Table 3. The electricity sector and FTAA: matrix of possible consequences**

Sub-sectors	MFN treatment	Market Access	National treatment	Transparency	Competitiveness
Generation	No country specific restrictions in rights to operate	No restrictions in concessions	No national privilege	All information public (contracts, system use, water levels, etc.)	No subsidies (tax exemptions, fast depreciation, water rights, etc.)
Wholesale markets		Public wholesale market			Spot market
Systems operations		Regular tenders for concessions			Competitive tenders for the concession
Transmission		Regular tenders for concessions Open access to lines			Competitive tenders for the concession
Distribution		All consumer groups accessible			Competitive tenders for concessions
Retail supply					Choice of retailer No price control

exchange of permits would set a "market price". These ideas are explored by organizations such as the World Bank (see Thobani, 1995).

### 3.4 OTHER CONSIDERATIONS

Beyond the possible extreme impacts of the FTAA on the electricity sector described in the three previous sections, more changes could have to be done at the legislative level of member countries. Almost all countries have specific acts providing a special legal framework to the electricity sector. In some countries, such as for instance Peru, some segments of the electricity supply are defined as a “public service”. The notions of “public service” and “public utility” are not recognized in the FTAA. The FTAA only defines “service supplied in the exercise of governmental authority” (services not supplies on a commercial basis and by more than one competing suppliers, see FTAA, chapter 8, article 1.6) and excludes some sectors from the FTAA (e.g. public education, health, see section 3.4 of this document), but not electricity service. The Peruvian Electric Concessions Law (LCE, *Ley de Concesiones Eléctricas, decreto ley N°: 25844*, November 19, 1992), however, uses the concept of a “public electricity service” (LCE, article 2) and declares this service to be of public utility. A full section of the LCE (section VI, articles 82-100) defines the rules of the public service of electricity, notably the obligation to supply if the customers comply with the general rules of supply (LCE, article 82). The absence of the notion of public service in the FTAA, with the obligation of countries to have national regulation consistent with the FTAA (FTAA, chapter 1, article 4.2) could have the consequence to remove the obligations of Peruvian distributors to offer a “public service” of electricity. This could even have an impact up to the Peruvian constitution, where public services are discussed in articles 58, 119 and 162. These three articles establish the legitimacy of the state involvement in some economic sector, within the context of a market economy. These constitutional articles, for example, allow a Ministry to be involved in the electricity sector, because it has some public service features. Although the Peruvian regulation can be defended as being part of “regulations to achieve domestic policy objectives” (as allowed in FTAA, chapter 8, article 1.9), there is ground in the FTAA to attack the notion of a public service: (1) It goes against some market access principles, notably the interdiction to put a limit on the value of services from supplier and to have quantitative restrictions on the supply of a service.<sup>21</sup> The public service of electricity indeed entails some cost and quantity considerations in supply. (2) The notion of public service also restricts competition, as exclusivity of supply is granted to a single supplier, the local distributor.

<sup>21</sup> In the draft FTAA text (FTAA, 2002), these principles on market access for services are found in chapter 8, article 7. Different formulations are proposed, but the interdiction of any type of quantitative limits on the services supplies is present in all of them.

This could be interpreted as going against article 1 of FTAA's chapter 10, for the promotion of economic efficiency and consumer welfare.

## CONCLUSION

We have reviewed how the electricity sector was treated in international and Western Hemisphere trade agreements. The general trend of having more inclusive trade agreements, with more participating countries and more goods and service sectors subject to the agreements, has been illustrated, with a special focus on electricity services. These services, originally excluded from the GATT and the GATS, and mostly from NAFTA, are now very close to being included in the GATS, and consequently in the FTAA. The possible long-term impacts on the electricity sector and its sub-sectors have been studied in the last section. Precisely foreseeing these impacts remains difficult because, first, the FTAA negotiations are not yet completed and, second, the extent to which possible exemptions could be applied is still unclear. However, a description of the most extreme impacts is possible, given the negotiation principles that are used in the FTAA and WTO negotiations. The logic of these principles would call for a radical change in the way the electricity sector is designed. Changes may not have to be made initially in all countries, but defending some sector exemptions could prove to be very difficult in the long run. Indeed, given the ultimate goal—full liberalization of all sectors—of both the FTAA and the GATS, discriminating sectors prone to market failures may not be feasible.

The presentation made here will hopefully lead to a better understanding of the possible merits of the FTAA for the electricity sector, and to a better choice in the decision to include or not electricity services in the scope of the FTAA.

## REFERENCES

- Bradley P.G. and Watkins G.C. (2003) "Canada and the U.S: A Seamless Energy Border?", *C.D. Howe Institute Commentary*, No. 178. Toronto: C.D. Howe Institute.
- Comisión Económica para América Latina y el Caribe (CEPAL) (1998) *A Bibliographical Note On Trade In Services: Concepts And Liberalization Principles*, DOC.CEPAL/ALCA/GTS/001.

Demsetz H. (1968). "Why Regulate Utilities?", *Journal of Law and Economics*, vol. 11, 55-65.

FTAA (2002) *Draft agreement*, FTAA.TNC/w/133/Rev.2

FTAA (2003) FTAA Official Website. Accessed on April 25, 2003,  
<http://www.ftaa-alca.org>

Government of Canada, Government of the United Mexican States and Government of the United States of America (1994) *North American Free Trade Agreement Between the Government of Canada, the Government of the United Mexican States and the Government of the United States of America*.

Griffin Cohen M. (2001) "From Public Good to Private Exploitation: GATS and the Restructuring of Canadian Electrical Utilities", *Canadian-American Public Policy*, Occasional Paper Series, Number 48, The Canadian-American Center, University of Maine.

Horlick G., Schuchhardt C. and Mann H. (2002) *NAFTA Provisions and the Electricity Sector*, Background Paper 4, Montréal: Commission for Environmental Cooperation of North America.

Organisation for Economic Co-operation and Development (OECD) (1995). *Regional Integration and the Multilateral Trading System – Synergy and Divergence*. Paris: OECD.

Organization of American States (OAS) Trade Unit (1997) *Provisions on Trade in Services in Trade and Integration Agreements of the Western Hemisphere*, Submitted to the FTAA Working Group On Services, SG/TU/WG.SER/DOC.1/96/Rev.3

Pineau P.-O. (2003a) *International Trade Agreements and the Peruvian Electricity Sector*, Documento de Trabajo No 13, Oficina de Estudios Económicos, Lima (Peru): Organismo Supervisor de la Inversión en Energía (OSINERG).

Pineau P.-O. (2003b) *The Treatment of Electricity in the FTAA*, 23<sup>rd</sup> Annual North American Conference of the US Association for Energy Economics/International Association for Energy Economics, Official Conference Proceedings, Mexico: IAEE.

- Plourde A. (1990), "Canada's international obligations in energy and the Free Trade Agreement with the United States", *Journal of World Trade*, 24(5).
- Plourde A. (1993), "Energy and the NAFTA", *C.D. Howe Institute Commentary*, No. 46. Toronto: C.D. Howe Institute.
- Thobani M. (1995) "Tradable Property Rights to Water – How to improve water use and resolve water conflicts", *Public Policy for the Private Sector*, FDP Note No. 34, Washington: The World Bank.
- United Nations (Undated) *Central Product Classification (CPC) Version 1.0*, Statistical Papers, Series M. No. 77, Ver. 1.0, United Nations publication, Sales No. E.98.XVII.5, Preface of the publication.
- Watkins G.C. (1993) "NAFTA and Energy: A Bridge Not Far Enough?" in Gliberman S. and Walker M., *Assessing NAFTA: A Trinational Analysis*, Vancouver: The Fraser Institute.
- World Trade Organization (WTO) (1991) *Services Sectoral Classification List*, Note by the Secretariat, MTN.GNS/W/120.
- WTO (1994) *Final Act Embodying The Results Of The Uruguay Round Of Multilateral Trade Negotiations*, Marrakesh: World Trade Organization.
- WTO (1998) *Energy Services – Background Note by the Secretariat*, Council for Trade in Services, S/C/W/52, 98-0000.
- WTO (1999) *An Introduction to the GATS*, Trade in Services Division, WTO Secretariat.
- WTO (2000a) *Communication from the United States – Classification of Energy Services*, Committee on Specific Commitments, S/CSC/W/27, 00-2044.
- WTO (2000b) *Communication from the United States – Energy Services*, Council for Trade in Services, S/CSS/W/24, 00-5556.
- WTO (2001a) *Ministerial Declaration*, Ministerial Conference, Doha, WT/MIN(01)/DEC/1, 01-5859.
- WTO (2001b) *Communication from Chile – The Negotiations on Trade in Services*, Council for Trade in Services, S/CSS/W/88, 01-2474.

- WTO (2001c) *Communication from the European Communities and their Member States – GATS 2000 Energy Services*, Council for Trade in Services, S/CSS/W/60, 01-1425.
- WTO (2001d) *Communication from Japan – Negotiation Proposal on Energy Services – Supplement*, Council for Trade in Services, S/CSS/W/42, 01-4772.
- WTO (2001e) *Communication from Venezuela – Negotiation Proposal on Energy Services – Supplement*, Council for Trade in Services, S/CSS/W/69, 01-1552.
- WTO (2002) *Communication from Cuba – Negotiating Proposal on Energy Services*, Council for Trade in Services, S/CSS/W/144, 02-1500.
- WTO (2003a) *Communication from the United States – An Assessment of Services Trade and Liberalization in the United States and Developing Countries*, Council for Trade in Services, TN/S/O/W/12, 03-1814.
- WTO (2003b) *Communication from the United States – Initial Offer*, Council for Trade in Services, TN/S/O/USA, 03-2003.
- WTO (2003c) *Communication from the Canada – Initial Conditional Offer on Service*, Council for Trade in Services, TN/S/O/CAN, 03-1909.
- WTO (2003d) *Communication from the Liechtenstein– Initial Offer*, Council for Trade in Services, TN/S/O/LIE, 03-2054.
- WTO (2003e) *Panama– Oferta inicial*, Council for Trade in Services, TN/S/O/PAN, 03-2035.
- WTO (2003f) *Communication from Venezuela – Negotiation Proposal on Energy Services – Addendum*, Council for Trade in Services, Special Session, S/CSS/W/69/Add.2, 03-2883.

## **Annex 1. The Commercial Reality of Energy Services and Energy Related Services (WTO, 2003f)**

**UPSTREAM** (Only activities that are usually outsourced are included)  
*Services for discovering and developing energy resources*

### **1. GEOLOGICAL EXPLORATION**

- 1.1. Exploration management services
- 1.2. Mapping services
- 1.3 Geophysical and geological services
- 1.4 Hydrological and meteorological studies
- 1.5 Exploration drilling

### **2. DRILLING AND COMPLETION OF OIL AND GAS WELLS**

- 2.1. On land site preparation and derrick installation
- 2.2 Off shore rig positioning and preparation
- 2.3. Drilling
- 2.4. Drilling bits services
- 2.5. Casing and tubular services
- 2.6. Mud engineering and supply
- 2.7. Solids control
- 2.8. Fishing and downhole special operations
- 2.9. Lodging and catering
- 2.10 Wellsite geology and drilling control
- 2.11. Core taking
- 2.12. Core analysis and other laboratory tests
- 2.13. Electrical, acoustic and radioactive logging
- 2.14. Well testing
- 2.15. Other wireline services

- 2.16 Supply and operation of completion fluids (brines)
- 2.17 Supply and installation of completion devices
- 2.18 Cementing {pressure pumping}

### **3. OIL AND GAS PRODUCTION RELATED SERVICES**

- 3.1. Stimulation services (fracturing and acidising) (pressure pumping)
- 3.2. Workover and well repair services
- 3.3 Plugging and abandoning of wells
- 3.4. Reservoir engineering and secondary recovery services
- 3.5. Design, construction and installation of production equipment
- 3.6. Early production control services
- 3.7. Firefighting and emergency control services provided on oil and gas fields.
- 3.8. Oil spill control services

### **DOWNSTREAM**

*Services for design, construction, operation and maintenance of energy facilities, including networks*

### **4.- DESIGN AND CONSTRUCTION OF FACILITIES TO PRODUCE, TRANSFORM, AND SUPPLY ENERGY.**

- 4.1 Engineering and Construction
- 4.2. Design and construction of drilling platforms, excluding construction of mobile floating units

4.3 Debugging, commissioning and start up

**5.- OPERATION AND MANAGEMENT OF ENERGY FACILITIES (EXCLUDING NETWORKS)**

- 5.1 Management and Engineering services applied to the operation of oil, gas and coal fields
- 5.2 Liquefaction and regasification of natural gas for transportation
- 5.4 Coal and crude oil refining, reforming and purification services

**6.- OPERATION AND MANAGEMENT OF ENERGY NETWORKS**

- 6.1. Transmission and distribution of electricity
- 6.2 Pipeline transportation and distribution
- 6.3. Services related to the operation of energy networks Central network control services  
Power management and monitoring services

**7.- MAINTENANCE OF ENERGY EQUIPMENT AND FACILITIES, INCLUDING NETWORKS**

- 7.1. Plant and equipment evaluations, damage assessments, repair studies
- 7.2. Reinstallation, upgrade and refurbishment activities for facilities and equipment
- 7.3. Preventive and periodic maintenance services of equipment
- 7.4. Offshore Vessel Transportation and Supply Services

**8.- ENVIRONMENTAL RELATED SERVICES FOR THE ENERGY INDUSTRY**

- 8.1 Decommissioning of energy facilities and networks
  - 8.2 Remediation of contaminated areas and facilities
  - 8.3 Handling, treatment and disposal of waste from energy facilities
  - 8.4 Pollution control and monitoring services
- Services for the commercialization of energy*

**9.-WHOLESALE SUPPLY OF ENERGY**

- 9.1 Wholesale activities for energy, energy products, and fuels
- 9.2 Wholesale of electricity, steam, hot water and town gas
- 9.3 Trading and brokering for energy, energy products, and fuels
- 9.4 Energy related liquid or gas storage activities

**10.- RETAIL SUPPLY OF ENERGY**

- 10.1 Retail sale activities for energy, energy products, and fuels
  - 10.2 Retail sales of electricity, steam, hot water and town gas
  - 10.3 Retail sales of motor fuels
  - 10.4 Retail customer attention services
  - 10.5 Customer call-out activities
- Other energy services*

**11. ENERGY CONSULTING SERVICES**

- 11.1 Consultancy and engineering services for energy efficiency and saving