

Chapter 4

Trade and Energy Security: Legal Assessment of the Linkages and Implications for India

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Abstract Energy is an issue that is strategically important for all countries—whether they are inherently energy-surplus or energy-deficit countries. Most countries worldwide typically use export or import restrictions as well as pricing regulations in order to regulate energy production, consumption, and trade. The WTO framework does not address all the issues that arise in the context of trade in energy. Energy-related discussions are however likely to gain prominence under the WTO with the increasing presence of oil-producing countries becoming WTO members in the past decade. The Doha Ministerial Declaration also highlights the need for deeper discussions on several aspects impacting trade in energy. The North American Free Trade Agreement (NAFTA) and the Energy Charter Treaty (ECT) are two examples of legally binding instruments at the multilateral level that address the trade-energy linkage. Both the NAFTA and the ECT emerged in distinct and very specific economic contexts, and hence cannot be transposed into the WTO framework or that of a separate agreement on energy. Nevertheless, provisions of these instruments are instructive of the type of provisions that are likely to be negotiated in the event of any multilateral negotiations on energy. The domestic regulatory framework governing energy in India is largely liberalized. There has been a gradual dismantling of regulatory controls over the past decade, and an ongoing liberalization process which has significantly enhanced private participation in sectors such as electricity, petroleum, and natural gas. Disinvestment in public-sector enterprises is also another core area where significant

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progress has been made. Nevertheless, as will be discussed in this chapter, there are gaps between the Indian regulatory framework and the mandate specified under the NAFTA and the ECT. Any engagement in the trade and energy debate would need to be assessed from a strategic perspective of India as an energy-deficit country, whose enterprises are gaining significant interests in export of petroleum products, and in investment in oil and gas assets worldwide.

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4.1 Trade and Energy: Mapping the Key Issues

There are broadly two schools of thought in the trade and energy debate. One school believes that WTO rules as they exist govern international trade as a whole, and while these have not been formulated with a view to governing the specificities of the energy sector, they are broad enough to be relevant and applicable to energy trade. Others however believe that since the WTO rules were not specifically framed for trade in energy, the WTO framework is insufficient to address several concerns pertaining to trade in energy.

At the regional level, there are two instruments that deal specifically with trade in energy. These are the chapter on Energy under the North American Free Trade Agreement (NAFTA) and the Energy Charter Treaty (ECT). If a multilateral instrument is considered, elements of these existing instruments are likely to form the basis of the discussions.

Development of any separate body of international rules in relation to trade and energy is likely to pose specific issues for both energy-rich countries and those dependent on imports of energy and energy products. The focus of this chapter is to make an assessment of the issues that are likely to be considered within the framework of a potential international instrument focusing on trade and energy. It then seeks to assess the likely implications of such issues for the regulatory framework within India governing energy.

Several provisions of the WTO's General Agreement on Tariffs and Trade (GATT) have implications for trade and energy. These include the Most Favoured Nation (MFN) treatment (Article I), National Treatment (Article III), Prohibition on Quantitative Restrictions (Article XI), General Exceptions (Article XX), Freedom of Transit (Article V), State Trading (Article XVII), as well as the other covered WTO agreements, particularly the Agreement on Subsidies and Countervailing Measures (ASCM), Agreement on Trade related Aspects of Trade-Related Aspects of Intellectual Property Rights and the Agreement on Technical Barriers to Trade.

There are however several gaps and ambiguities in these WTO rules with regard to their relevance for energy trade. The Doha Ministerial Declaration highlighted the need for further negotiations on issues relating to transit, dual pricing, and energy services. WTO-related issues pertaining to energy, including the discussions under the Doha Round, are discussed below.

4.1.1 Production Controls

The issue of imposition of restrictions on the production of energy goods by energy exporting countries and the prevailing ambiguity in the existing WTO rules in respect of such production restraints, is a key issue. As such there is no explicit rule on production restrictions in the WTO. Further, legal scholars are divided on whether such production restriction policies can be covered within the principles enshrined in Article XI:1 of the GATT which prohibits WTO members from employing quantitative export restrictions. This issue is especially relevant in the context of the Organization of Petroleum Exporting Countries (OPEC), which has been using production management policy for influencing the global oil market (Worika 2010). Arguments favoring the inclusion of production controls within the scope of Article XI emphasize that the language of Article XI is expansive, and that in addition to prohibiting “quotas, import or export licences”, it also applies to “other measures having equivalent effect” (Cottier et al. 2009). This argument in essence is that it is not the legal form of the measure but its effect on trade which is important, and that measures that interfere with the free flow to the market of a given product would be covered by its ambit. It is also noteworthy in this regard that a GATT Panel in *Canada—Measures Affecting Exports of Unprocessed Herring and Salmon* concluded that provisions of Article XI:1 apply to any measure taken by a contracting state in respect of export restrictions, ‘irrespective of the legal status of the measure’.

A natural extension of such an interpretation, however, could lead to the implication that one WTO Member could have recourse to Article XI:1 in order to commit another member to producing more of its natural resources to satisfy world demand. Such an interpretation would however impinge on the basic principle of national sovereignty over natural resources. Moreover, there is also the question whether an energy-related product such as oil, before its extraction, can be considered a “tradable product” and made subject to WTO rules or not (Botha 2009).

4.1.2 Dual Pricing

Dual pricing of energy products is a practice often followed by energy exporting countries to impose lower prices for domestic market consumption as compared to the price of exports. This is another controversial issue. Depending on the motivation and means of creating price differential, several WTO rules may be applicable to the issue of dual pricing. However, one of the most significant aspects is whether a dual pricing mechanism can be considered as a prohibited subsidy under the ASCM as it gives a comparative advantage to domestic energy intensive industries on account of lower domestic prices of energy products. The opinion among scholars is divided based on different interpretations of the concept of specificity used in defining subsidies under the SCM Agreement. As there is no clear WTO jurisprudence on the issue of dual pricing and subsidies, this continues to be an open issue.

It is also important to note that dual pricing has been a key issue for discussion in the accession negotiations of energy exporting countries like Russia and Saudi Arabia and is also one of the few energy-related issues being dealt with under the current Doha Round negotiations. The major point of discussion has been the relationship between dual pricing policies and the WTO rules on subsidies as contained in the ASCM. The US has raised the issue of dual pricing in respect of energy products, on the reasoning that dual pricing policies confer unfair advantage to the local energy intensive industries. This view has been opposed by energy exporting countries, especially Venezuela.

4.1.3 Energy Services

Another controversial and problematic issue in the trade-energy debate is that of energy sector-related services. There is an elementary issue concerned with the definition and classification of energy services covered under the General Agreement on Trade in Services (GATS), arising from the existing system of classification contained in the document MTN.GNS/W/120 (W/120), under which there is no energy sector specific category. Instead subclasses of energy services have been included in different sectoral categories. For example, “services

incidental to energy distribution” and “services incidental to mining” are listed as a subclass under “Other Business Services” and “pipeline transportation of fuel” is listed as a subclass under “Transport Services”. Apart from this, other energy sector-related services are dispersed under various other categories. Therefore different energy sector-related services are covered under different categories. This type of classification which lists various services related to energy sector under completely different subheadings, in the view of some scholars, unnecessarily complicates the trade in energy debate, and creates an obstacle in facilitation of trade in energy services (Cottier et al. 2009).

There are a number of practical difficulties in properly defining and classifying energy services. For instance, there is no clarity as to whether electricity should be considered a good or a service. In India, for instance, electricity is treated as a good that can be sold and purchased. Similarly, activities like oil refining or liquefaction and gasification of gas are so closely associated with the production process that there is question mark whether they can be considered as services distinct from the production itself.

In the Doha Round discussions on Energy Services, proposals from US and the EU have advocated creation of a separate category for energy services. Another notable development has been a collective request made by some WTO members like Australia, Canada, the European Communities, Japan, Norway, The Kingdom of Saudi Arabia, Republic of Korea, and the United States targeted at a group of countries including Argentina, Brazil, Brunei, Chile, China, Colombia, Ecuador, Egypt, India, Indonesia, Kuwait, Malaysia, Mexico, Nigeria, Oman, Pakistan, Peru, Philippines, Qatar, South Africa, Thailand, Turkey, United Arab Emirates asking them to enhancing market access with respect to energy services. The proposal is aimed at achieving liberalization in core activities of oil and gas production, processing, and distribution.

4.1.4 Energy Transit

The WTO rules on transit of goods are covered under Article V of GATT, which mandates that: “there shall be freedom of transit through the territory of each contracting party, via the routes most convenient for international transit, for traffic in transit to or from the territory of other contracting parties. No distinction shall be made which is based on the flag of vessels, the place of origin, departure, entry, exit or destination, or on any circumstances relating to the ownership of goods, of vessels or of other means of transport”.

Article V further mandates that traffic in transit should not be subject to unnecessary delays or restrictions and shall be exempt from customs duties and from all transit duties or other charges imposed in respect of transit, except transportation or administrative expenses in relation to the transit. WTO members are also obligated to ensure MFN treatment in respect of all charges, regulations, and formalities in connection with transit, and accord to products which have been

in transit through the territory of any other member, treatment no less favorable than that which would have been accorded to such products had they been transported from their place of origin to their destination without going through the territory of such other member.

Due to the distinct characteristics of some energy products like oil, natural gas, and electricity and corresponding modes of transport, there are a few unresolved issues with respect to the principle of freedom of transit as provided under Article V. An issue in this regard is whether its provisions are also applicable to transit through fixed infrastructure like pipelines and electricity grids (WTO 2010). The broad language of Article V uses the expression “other means of transport”. In the absence of any specific exception, transit through fixed infrastructure is generally considered to be covered within its ambit. But this does not settle other complicated issues related to transit through fixed infrastructure. For instance, issues like construction of new transit capacity and security and non-interruption of energy flows which are very important in case of transport through pipelines and grids are not addressed under the current WTO rules. There are also no multilateral rules that apply to private enterprises in control of the transit infrastructure.

The issue of transit is being considered under the negotiations on trade facilitation in the Doha Round. Several WTO members made proposals with the aim of clarifying and improving the provisions of GATT Article V in the context of transportation of energy goods. The thrust of the discussions were on issues relating to clarification of the definition of traffic in transit to include transit using fixed infrastructure, obligations relating to operation of transit infrastructure, transit-related fees, and charges. These discussions have however so far been inconclusive. The draft Agreement on Trade Facilitation concluded at the Bali Ministerial Conference in December 2013, do not include provisions relating to these issues.

4.1.5 Investment and Competition

Investment and competition issues are often considered critical in any relation to trade and energy. Except for the Trade-Related Investment Measures (TRIMs) Agreement, the WTO rules do not delve into investment-related issues. The WTO is also silent on competition-related concerns, an area which is crucial specifically in the context of OPEC’s supply and price management activities.

4.1.6 Environment, Sustainable Development, and Energy Security

There is no specific linkage within the text of the WTO Agreements of sustainable development and environment with energy security. The WTO’s core focus is on trade obligations. Environment and sustainable development are referred to in the

Preamble to the Marrakesh Agreement establishing the WTO. The main principles in this regard are trade in goods and services should be conducted in a manner that would allow “for the optimal use of the world’s resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development”.

In actual practice, there could be several environmental issues related to the trade and energy debate. Following are some of the key ones:

- Imposition of border tax adjustments in relation to domestic Greenhouse Gas (GHG) reduction policies and its compatibility with Article II:2(a) of the GATT;
- Technical regulations and standards related to energy efficiency and GHG reduction;
- Subsidies related to renewable and bio-fuel industries; and
- Relationship between environmental considerations related to energy trade and general exceptions under the GATT and the GATS.

4.2 NAFTA and the Energy Charter Treaty

As discussed briefly in the introduction to this chapter, the NAFTA and the ECT are two examples of legally binding instruments at the regional or plurilateral level that address the trade-energy linkage. It is important to bear in view that both the NAFTA and the ECT emerged in distinct and very specific economic contexts.

In the context of NAFTA, it is an agreement that includes both a major importing country (the United States) and an important exporting country (Mexico) at significantly different levels of economic development. It also includes Canada—an economically advanced country that is considered generally to be self-reliant in energy, and also imports and exports different types of energy products. This aim of including Mexico, which pursued substantially different developmental goals and policy objectives than the other two parties, had a considerable impact on the negotiations and the resultant text of the agreement. This is particularly true for the energy-trade-related provisions of NAFTA. Chapter 6 of NAFTA incorporates rules on minimum and maximum export price requirements, export taxes, energy regulatory measures which are relevant for issues such as production restrictions and dual pricing. Apart from this the overall framework of NAFTA rules on trade in goods, services, investment, and competition policy apply to energy trade as well.

The ECT has a wider membership—51 European and Asian countries have signed or acceded to the ECT. All EU states are individual signatories, but the Treaty has also been signed collectively by the European Community. Among

non-EU countries, Australia, Belarus, Iceland, and Norway are signatories.¹ The increasing interest in the ECT is reflected in the growing number of countries that have observer status. This includes Afghanistan, Algeria, Bahrain, Canada, China, Egypt, Indonesia, Iran, Jordan, Korea, Kuwait, Morocco, Nigeria, Oman, Pakistan, Palestinian National Authority, Qatar, Saudi Arabia, Serbia, Syria, Tunisia, United Arab Emirates, United States of America, and Venezuela. The Russian Federation considered becoming a party to the ECT, but eventually withdrew from it.

With respect to trade-related provisions, the ECT has adopted the principle of non-derogation from WTO rules which are applicable to energy trade as the baseline standard, its provisions, especially those concerned with investment rules, competition policy and transit, may be of significance during any potential negotiations or discussions on energy trade within the WTO. The ECT has evolved and been formulated specifically to address the very sui generis energy issues faced by developed European countries, which broadly speaking do not have a parallel particularly in relation to India. The provisions of the ECT are tailored to ensure access to energy across countries particularly natural gas pipelines and electricity transmission lines. A majority of the European countries obtain access to natural gas and electricity through international, inter-country natural gas pipelines and electricity transmission lines. Consequently, the provisions of the ECT have high emphasis on “transit provisions” that allow natural gas pipelines and electricity transmission lines to cross countries, prevent “discrimination in transit”, and thereby prevent countries from denying right of way to the flow of gas or electricity.

We discuss below the key elements of NAFTA and ECT on energy trade.

4.2.1 North American Free Trade Agreement

The key features of Chap. 6 of the NAFTA titled “*Energy and Basic Petrochemicals*”, are discussed below.

4.2.1.1 Energy Products and Services: Definitional Issues

The application of provisions of Chap. 6 extends 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”.

¹ ECT members (as of April 2014): Afghanistan, Albania, Armenia, Australia*, Austria, Azerbaijan, Belarus*, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, European Community (now European Union), Finland, France, Georgia, Germany, Greece, Hungary, Iceland*, Ireland, Italy, Japan, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Mongolia, Netherlands, Norway*, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan (*denotes where ratification of the Treaty is pending).

On the issue of what all energy goods are covered within the ambit of the expression “energy and basic petrochemical goods”, Chap. 6 lists products under their Harmonized Commodity Description and Coding System (HS) codes. This is a comprehensive list that includes uranium ores and concentrates, plutonium, thorium, and their compounds, coal, crude oil, petroleum oils, liquefied petroleum gas, other gaseous hydrocarbons, petroleum oils, petroleum jelly, etc.

4.2.1.2 Regulation of Energy Products and Services

Chapter 6 “incorporates the provisions of the GATT with respect to the prohibitions or restrictions on trade in energy and basic petrochemical goods”. In addition to this, Chap. 6 comprises GATT-plus provisions, which are discussed below.

Minimum and maximum import/export price requirements: NAFTA parties are prohibited from imposing minimum or maximum export/import price requirements, except in respect of enforcement of countervailing and antidumping orders and undertakings.²

Under the WTO, there is no explicit prohibition of minimum and maximum price requirements. However, any minimum export price (MEP) requirement is likely to be seen to violate Article XI if it acts as a restriction on exports. The key principle in this regard has been laid out in a GATT Panel report of *Japan—Semi-Conductors* where a GATT Panel held that a measure preventing exportation below a minimum price level inherently constitutes a “restriction” that is inconsistent with Article XI:1. This principle was followed and applied recently by a WTO Panel in *China-Raw Materials*. While this latter finding was set aside by the Appellate Body on the ground that the request for consultations by the complainants had not clearly identified the measures constituting MEP and the grounds for challenging the MEP, nevertheless, the reasoning adopted by the WTO Panel in *China-Raw Materials*, and previously by the GATT Panel in *Japan-Semi-Conductors*, are instructive of the approach that is likely to be taken to address the issue of MEP.

The NAFTA approach presents a clear prohibition, whereas under the WTO, any issue of impact of export price acting as an export restriction, would need to be established through reasoning based on the facts.

Avoiding undue interference: The NAFTA provides that in the event a party adopts or maintains any restriction on import of an energy good from non-parties, parties shall consult to avoid undue interference with or distortion of pricing, marketing, and distribution arrangements.³ There is no such requirement under the WTO.

² Article 603(2), NAFTA.

³ Article 603(4), NAFTA.

4.2.1.3 Export Taxes

NAFTA Article 604 prohibits the adoption and imposition of any duty, tax, or other charge on exports of energy goods. However, a party can adopt or maintain any duty, tax, or other charge on the export of any energy or basic petrochemical product if it is done on the exports to all the other parties, and if such good is primarily to be consumed domestically. As there is no express regulation of export taxes in the WTO regime, the inclusion of such a provision is another example of a WTO-plus requirement.

4.2.1.4 Energy Regulatory Measures

Energy regulatory measures have been defined broadly in Chap. 6 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”.⁴ Such measures are required to comply with other provisions of NAFTA such as the National Treatment principle, and provisions pertaining to import/export restrictions and export taxes.⁵

It has been further provided that each party shall seek to ensure that in application of any energy regulatory measure, energy regulation bodies within its territory avoid disruption of contractual relationships to the maximum extent practicable, and provide for orderly and equitable implementation appropriate to such measures.⁶

4.2.1.5 Exceptions

Export Restrictions: NAFTA Parties can maintain restrictions listed under GATT Article XI: 2(a) (temporary domestic shortage) and GATT Article XX(g), (i) and (j) (General Exceptions). However, Chap. 6 of NAFTA introduces three additional requirements to be fulfilled in this regard, which are that⁷:

- The restriction does not reduce the proportion of the total export shipments of a specific energy good made available to the other Party relative to the total supply of that good of the Party maintaining the restriction as compared to the proportion prevailing in the most recent 36-month period;
- The Party does not impose a higher price for exports of an energy good to the other Party than the price charged for such energy good when consumed domestically;

⁴ Article 609, NAFTA.

⁵ Article 606(1), NAFTA.

⁶ Article 606(2), NAFTA.

⁷ Article 605, NAFTA.

- The restriction does not require the disruption of normal channels of supply to the other Party or normal proportions among specific energy goods supplied.

Article 605, thus, narrows the exceptions available under the WTO regime by imposing the above-mentioned additional requisites. Mexico is however exempted from these requirements.

National Security Measures: As regards national security exceptions, any restrictive measure under GATT Article XXI (Security Exceptions), or under Article 2102 of NAFTA can only be invoked for the following purposes:

- Supply to military establishment or fulfilling a defense contract;
- In response to a situation of armed conflict involving the Party taking measure and;
- In response to direct threats of disruption in the supply of nuclear materials for defense purposes.⁸

These are GATT-plus requirements which limit the scope of use of GATT Article XXI. Mexico is exempted from these additional requirements.

4.2.1.6 Trade in Services

NAFTA Article 602(1) makes the provisions of Chap. 6 applicable to the cross-border trade in services associated with energy and basic petrochemical goods, which includes provision of a service:

- from the territory of a Party into the territory of another Party;
- in the territory of a Party by a person of that Party to a person of another Party;
or
- by a national of a Party in the territory of another Party.

4.2.1.7 Anti-competitive Practices

According to NAFTA Article 601(3), parties recognize the importance of having viable and internationally competitive energy and petrochemical sectors to further their national interests. Article 603(5) which allow parties to administer import/export licensing system mandates that such a licensing system should be consistent with Article 1502 which deals with Monopolies and State Enterprises. Article 1502 allows the party to designate a monopoly but in case such a monopoly affects the persons on any other party then the following conditions have to be maintained:

⁸ Article 607, NAFTA.

- Wherever possible, prior written notification to the other Party of the designation;
- Endeavor to introduce at the time of the designation such conditions on the operation of the monopoly as will minimize or eliminate any nullification or impairment of benefits;
- Each party shall ensure, through regulatory control, administrative supervision, or application of any other measures;
- Wherever a designated monopoly is exercising regulatory, administrative, or other governmental authority that has been delegated to it acts in a manner consistent with the NAFTA obligations;
- Commercial considerations must be of sole importance in its purchase or sale of the monopoly good or service in the relevant market;
- Non-discrimination against other parties' investors or providers of goods or services and;
- It must not act anti-competitively in non-monopolized markets so as to adversely affect the investments of other Parties' investors.

4.2.1.8 Rules for State Enterprises

Chapter 15 of NAFTA prescribes rules for state enterprises. Accordingly, each party shall ensure that any state enterprise that it maintains or establishes acts in a manner that is not inconsistent with the party's obligations under investment and financial services provisions of NAFTA, wherever such enterprise is exercising any regulatory, administrative, or other governmental authority that the party has delegated to it, such as the power to expropriate, grant licenses, approve commercial transactions or impose quotas, fees, or other charges. Further, parties shall also ensure that state enterprises accord non-discriminatory treatment in the sale of its goods or services to investments in the party's territory of investors of another party.

These restrictions do not apply to procurement by governmental agencies of goods or services for governmental purposes and not with a view to commercial resale or with a view to use in the production of goods or the provision of services for commercial sale.⁹

4.2.1.9 Investment-Related Reservations Relevant to Energy Sector

NAFTA Article 601(2) states that the parties recognize 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. But there are no specific provisions which deal with privatization in

⁹ Article 1502(4), NAFTA.

the energy sector. In this regard, Chap. 11 of NAFTA which deals with ‘Investment’-related issues is noteworthy.

The four basic obligations it imposes on the NAFTA parties with respect to investment are: national treatment; MFN treatment; a minimum international standard of “fair and equitable treatment” for investments by investors of other NAFTA parties; and a prohibition on the use of performance requirements with respect to NAFTA investors.

Parties are however allowed to list their reservations to the NAFTA obligations.

It is interesting to note in this regard that Mexico has taken reservations relating to: activities related to the exploration and exploitation, refining and processing of crude oil and natural gas; production of artificial gas, basic petrochemicals, and their feedstock and pipelines; foreign trade, transportation, and distribution with regard to crude oil, natural, and artificial gas and energy products and basic petrochemicals.

The only oil and gas-related sector open for investment by investors from other NAFTA parties in Mexico is in “non-basic petrochemicals”.

4.2.1.10 Expansion of Opportunities for Foreign Investors in Specific Stages of Oil Exploration, Extraction, and Refinement

There is no specific provision in the context of foreign investment in oil exploration, extraction, and refinement in Chap. 6. NAFTA Article 608, though, provides that the parties agree to allow existing and future incentives for oil and gas exploration, development, and related activities in order to maintain the reserve base for these energy resources.

However, as will be discussed in Sect. 4.2.1.11, Mexico has reserved for itself the exploration and exploitation of crude oil and natural gas; refining or processing of crude oil and natural gas. This is consistent with its approach to reservations under Chap. 11 on Investments discussed in Sect. 4.2.1.9.

4.2.1.11 Reservations and Special Provisions for Mexico

A very important part of energy trade regulation is the Annex 602.3 of NAFTA which lists the reservations and special provisions relating to Chap. 6. Of particular interest is the wide nature of reservations and special provisions applicable to Mexico. Mexico has reserved for itself the following strategic activities, including investment and provision of services in such activities:

- Exploration and exploitation of crude oil and natural gas; refining or processing of crude oil and natural gas; and production of artificial gas, basic petrochemicals, and their feedstock and pipelines;

- Foreign trade; transportation, storage, and distribution, up to and including the firsthand sales of Crude oil, Natural and artificial gas, Goods obtained from the refining or processing of crude oil and natural gas, and basic petrochemicals;
- The supply of electricity as a public service in Mexico, including, the generation, transmission, transformation, distribution, and sale of electricity; and
- Exploration, exploitation, and processing of radioactive minerals, the nuclear fuel cycle, generation of nuclear energy, transportation and storage of nuclear waste, use and reprocessing of nuclear fuel and the regulation of their applications for other purposes, and the production of heavy water.
- An enterprise of another party may acquire, establish, and/or operate an electrical generating facility in Mexico to meet the enterprise's own supply needs. Electricity generated in excess of such needs must be sold to the Federal Electricity Commission (Comisi n Federal de Electricidad) (CFE) and CFE shall purchase such electricity under terms and conditions agreed to by CFE and the enterprise.
- An enterprise of another party may acquire, establish, and/or operate a co-generation facility in Mexico that generates electricity using heat, steam or other energy sources associated with an industrial process. Electricity generated in excess of the industrial facility's supply requirements must be sold to CFE and CFE shall purchase such electricity under terms and conditions agreed to by CFE and the enterprise.
- An enterprise of another party may acquire, establish, and/or operate an electricity generating facility for independent power production (IPP) in Mexico. Electricity generated by such a facility for sale in Mexico shall be sold to CFE and CFE shall purchase such electricity under terms and conditions agreed to by CFE and the enterprise.
- Where an IPP located in Mexico and an electric utility of another Party consider that cross-border trade in electricity may be in their interests, each relevant party shall permit these entities and CFE to negotiate terms and conditions of power purchase and power sale contracts. The modalities of implementing such supply contracts are left to the end users, suppliers and CFE and may take the form of individual contracts between CFE and each of the other entities. Each relevant Party shall determine whether such contracts are subject to regulatory approval.

4.2.2 Energy Charter Treaty

4.2.2.1 Energy Products and Services: Definitional Issues

The ECT lists the covered energy materials and products in two distinct Annexes—Annex EM and Annex EQ. Annex EM has three categories of energy material and products: nuclear energy; coal, natural gas, petroleum and petroleum

products, and electrical energy; and other energy. Annex EQ lists energy-related equipment.

As regards the scope of “economic activity in the energy sector” the ECT provides that this encompasses economic activity concerning the exploration, extraction, refining, production, storage, land transport, transmission, distribution, trade, marketing, or sale of energy materials and products. However, activities specified in Annex NI,¹⁰ or concerning the distribution of heat to multiple premises are not covered.¹¹

4.2.2.2 Regulation of Energy Products and Services, Including Tariff Reduction

The ECT mandates non-derogation from the WTO provisions for the parties who are WTO members and extends such WTO provisions for trade in the energy sector to nations who are not WTO members. For ECT parties which are also WTO members, WTO rules apply. In respect of ECT parties which are not WTO members, interim provisions have been provided in Article 29. The provisions of Article 29 are primarily to govern the trade between parties where at least one is not member of the WTO. These provisions closely follow the WTO standards, subject, however, to some exceptions and modifications. It is important to note that since most of the ECT parties have become WTO members the relevance of Article 29 has reduced significantly.¹²

4.2.2.3 Transit Provisions

The ECT also lays down provisions relating to transit of energy material and products under Article 7. As a general rule, it has been provided that each party shall take the necessary measures to facilitate the transit of energy materials and products consistent with the principle of freedom of transit and without distinction as to the origin, destination, or ownership or discrimination as to pricing on the basis of such distinctions, and without imposing any unreasonable delays, restrictions, or charges. National treatment principle in respect of a party’s legal

¹⁰ Annex NI lists the following:

27.07 Oils and other products of the distillation of high temperature coal tar; similar products in which the weight of the aromatic constituents exceeds that of the non-aromatic constituents (e.g., benzole, toluole, xylole, naphtalene, other aromatic hydrocarbon mixtures, phenols, creosote oils and others).

44.01.10 Fuel wood, in logs, in billets, in twigs, in faggots or in similar forms.

44.02 Charcoal (including charcoal from shells or nuts), whether or not agglomerated.

¹¹ Article 1(5), ECT.

¹² Azerbaijan, Belarus, Bosnia and Herzegovina, Kazakhstan, Turkmenistan, Uzbekistan are the only ECT parties who are not WTO members.

provisions relating to transport on energy material and products and the use of energy transport facilities has been adopted. In the event of any dispute over any matter arising from transit, the parties shall not interrupt or reduce or permit any entity subject to its control the existing flow of energy materials and products except where this is specifically provided for in a contract or other agreement governing such transit or permitted in accordance with the conciliator's decision.

Parties shall encourage relevant entities to cooperate in:

- Modernizing energy transport facilities necessary to the transit of energy materials and products;
- The development and operation of energy transport facilities serving the areas of more than one party;
- Measures to mitigate the effects of interruptions in the supply of energy materials and products; and
- Facilitating the interconnection of energy transport facilities.

Further, it has been provided that in the event that transit cannot be achieved on commercial terms by means of energy transport facilities, the parties shall not place obstacles in the way of new capacity being established. However, the parties are not obligated to permit the construction or modification of energy transport facilities or permit new or additional transit through existing energy transport facilities which it demonstrates to the other parties concerned would endanger the security or efficiency of its energy systems, including the security of supply. There is also a separate provision dealing with resolution of disputes and conflicts between the parties in context of any of the provisions relating to transit.

4.2.2.4 Trade and Investment

Article 5 of the ECT provides that no party shall apply any TRIMs that are inconsistent with the provisions on national treatment and quantitative restrictions of the GATT, however, this shall be without prejudice to the party's rights and obligations under the GATT and related instruments and ECT Article 29 (interim measures).

Further, such measures include any investment measure which is mandatory or enforceable under domestic law or under any administrative ruling, or compliance with which is necessary to obtain an advantage, and which requires:

- the purchase or use by an enterprise of products of domestic origin or from any domestic source;
- that an enterprise's purchase or use of imported products be limited to an amount related to the volume or value of local products that it exports;
- the importation by an enterprise of products used in or related to its local production, generally or to an amount related to the volume or value of local production that it exports;

- the importation by an enterprise of products used in or related to its local production by restricting its access to foreign exchange to an amount related to the foreign exchange inflows attributable to the enterprise; or
- the exportation or sale for export by an enterprise of products, whether specified in terms of particular products, in terms of volume, or value of products, or in terms of a proportion of volume or value of its local production.

The general rule laid down in ECT Article 5, however, shall not be construed to prevent a party from applying TRIMs described in the above-mentioned first and third bullet points as a condition of eligibility for export promotion, foreign aid, government procurement, or preferential tariff or quota programs.

4.2.2.5 Exceptions

ECT Article 24 deals with the provisions relating to exceptions. This provision deals with general and security exceptions similar to the approach adopted in Articles XX and XXI of the GATT, with some additional provisions and qualifications.

General Exceptions: The general exceptions available for any party are its ability to adopt or maintain measures on the following grounds:

- Necessary to protect human, animal, or plant life or health;
- Essential to the acquisition or distribution of energy materials and products in conditions of short supply arising from causes outside the control of that party, provided that any such measure shall be consistent with the principles that
 - All other parties are entitled to an equitable share of the international supply of such energy materials and products; and
 - Any such measure that is inconsistent with ECT shall be discontinued as soon as the conditions giving rise to it have ceased to exist;
- Designed to benefit investors who are aboriginal people or socially or economically disadvantaged individuals or groups or their investments and notified to the ECT Secretariat as such, provided that such measure:
 - Has no significant impact on that party's economy; and
 - Does not discriminate between investors of any other party and investors of that party are not included among those for whom the measure is intended.

The exceptions above is subject to a further proviso that no such measure shall constitute a disguised restriction on economic activity in the energy sector, or arbitrary or unjustifiable discrimination between parties or between investors or other interested persons of parties. Such measures shall be duly motivated and shall not nullify or impair any benefit one or more other parties may reasonably expect under ECT to an extent greater than is strictly necessary to the stated end.

Security Exceptions: Security exceptions under the ECT state that its provisions shall not prevent any party from taking any measure which it considers necessary:

- For the protection of its essential security interests including those
 - Relating to the supply of energy materials and products to a military establishment; or
 - Taken in time of war, armed conflict, or other emergency in international relations;
- Relating to the implementation of national policies respecting the non-proliferation of nuclear weapons or other nuclear explosive devices needed to fulfill its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons, the Nuclear Suppliers Guidelines, and other international nuclear non-proliferation obligations or understandings; or
- For the maintenance of public order.

The ECT further provides that such measures shall not constitute a disguised restriction on Transit.

4.2.2.6 Anti-competitive Practices

Article 6 of the ECT deals with energy sector-related competition issues. ECT's approach in this regard is more expansive than that of NAFTA. There is a general obligation on the parties to work to alleviate market distortions and barriers to competition.¹³ Further, the parties shall ensure that they have and enforce such laws as are necessary and appropriate to address unilateral and concerted anti-competitive conduct in "economic activity in the energy".¹⁴

Pursuant to Article 6(5) of the ECT, a party can request the competition authorities of any other party to initiate enforcement action if such a party considers that any specified anti-competitive conduct carried out within the jurisdiction of the other party is adversely affecting an important interest. The notified party may consult with the notifying party and have to accord full consideration to the request of the notifying party while deciding whether or not to initiate enforcement action with respect to the alleged anti-competitive conduct. The notified party also has to inform the notifying party of its decision and may, if it wishes, also inform the grounds for the decision. If enforcement action is initiated, the notified party shall advise the notifying party of its outcome and, to the extent possible, of any significant interim development.

Apart from this, provisions for "technical assistance on the development and implementation of competition rules" and for "consultation and information exchange on competition issues" have also been included in Article 6(3) and (4) of the ECT.

¹³ Article 6(1), ECT.

¹⁴ Article 6(2), ECT; Economic Activity in the Energy is defined in Article 1(5) as: an economic activity concerning the exploration, extraction, refining, production, storage, land transport, transmission, distribution, trade, marketing, or sale of Energy Materials and Products except those included in Annex NI, or concerning the distribution of heat to multiple premises.

4.2.2.7 Procurement Rules for State-Owned Enterprises

The ECT excludes the applicability of the WTO Agreement of Government Procurement. However, Article 22 of the ECT deals with provisions for state and privileged enterprises. According to this provision, each party shall ensure that any state enterprises which it maintains or establishes shall conduct its activities in relation to the sale or provision of goods and services in a manner consistent with the obligations of the ECT relating to investment protection and promotion of the ECT.¹⁵ Further, the parties shall also ensure that any entity, established or maintained by it, which is entrusted with regulatory, administrative or other governmental authority, shall exercise that authority in a manner consistent with ECT obligations.¹⁶

4.2.2.8 Privatization of State-Owned Enterprises in the Energy Sector

The ECT does not explicitly provide for privatization of state-owned enterprises in the energy sector. But its extensive investment-related provisions stipulate, as general obligations, creation of stable, equitable, favorable, and transparent conditions for foreign investors belonging to the other parties, and inclusion of a commitment to accord to the investments made by such investors a fair and equitable treatment and most constant protection and security.¹⁷ State and privileged enterprises are required to ensure strict adherence with such provisions (Article 22 of ECT). Further, it is provided that the parties shall not impair the management, maintenance, use, enjoyment, or disposal of investments by reason of unreasonable or discriminatory measures. The national treatment principle and the most favoured nation principle have been adopted and the parties have to offer such treatment whichever is the most favorable.¹⁸ Each party shall also ensure that its domestic law provides effective means for the assertion of claims and the enforcement of rights.¹⁹ Apart from this some other provisions like access to capital,²⁰ state and privileged enterprises²¹ and competition concerns²² seek to create favorable circumstances for increased private participation.

¹⁵ Article 22(1), ECT.

¹⁶ Article 22(3), ECT.

¹⁷ Article 10(1), ECT.

¹⁸ Article 10(7), ECT.

¹⁹ Article 10(12), ECT.

²⁰ Article 9, ECT.

²¹ Article 22, ECT.

²² Article 6, ECT.

4.2.2.9 Environmental Considerations and the PEEREA

Article 19 of the ECT deals with environmental aspects relating to energy trade. Recognizing the concept of sustainable development and the obligations under environmental international agreements, this provision mandates that each party shall strive to minimize in an economically efficient manner harmful environmental impacts²³ occurring either within or outside its area from all operations within the energy cycle,²⁴ taking proper account of safety. This provision also recognizes the ‘precautionary’ and the ‘polluter pays principle’.²⁵

In addition ECT parties are also obligated to take into consideration:

- Environmental considerations throughout the formulation and implementation of their energy policies;
- Promotion of market-oriented price formation and a fuller reflection of environmental costs and benefits throughout the energy cycle;
- Encourage cooperation in the attainment of the environmental objectives of the charter and cooperation in the field of international environmental standards for the energy cycle, taking into account differences in adverse effects and abatement costs between parties;
- Have particular regard to improving energy efficiency,²⁶ to developing and using renewable energy sources, to promoting the use of cleaner fuels and to employing technologies and technological means that reduce pollution;
- Promote the collection and sharing among parties of information on environmentally sound and economically efficient energy policies and cost-effective practices and technologies;
- Promote public awareness of the environmental impacts of energy systems, of the scope for the prevention or abatement of their adverse environmental impacts, and of the costs associated with various prevention or abatement measures;
- Promote and cooperate in the research, development, and application of energy efficient and environmentally sound technologies, practices, and processes

²³ Environmental Impact has been defined in ECT Article 19(3) as: “any effect caused by a given activity on the environment, including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interactions among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors.”

²⁴ Energy Cycle has been defined in ECT Article 19(3) as: “the entire energy chain, including activities related to prospecting for, exploration, production, conversion, storage, transport, distribution and consumption of the various forms of energy, and the treatment and disposal of wastes, as well as the decommissioning, cessation or closure of these activities, minimizing harmful environmental impacts”.

²⁵ Article 19(1), ECT.

²⁶ Improving Energy Efficiency has been defined in Article 19(3) as: “acting to maintain the same unit of output (of a good or service) without reducing the quality or performance of the output, while reducing the amount of energy required to produce that output”.

which will minimize harmful environmental impacts of all aspects of the energy cycle in an economically efficient manner;

- Encourage favorable conditions for the transfer and dissemination of such technologies consistent with the adequate and effective protection of intellectual property rights;
- Promote the transparent assessment at an early stage and prior to decision, and subsequent monitoring, of environmental impacts of environmentally significant energy investment projects;
- Promote international awareness and information exchange of parties on relevant environmental programs and standards and on the implementation of those programs and standards;
- Participate, upon request, and within their available resources, in the development and implementation of appropriate environmental programs in the parties.

The parties to the ECT have also concluded the Energy Charter Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA). The PEEREA is aimed at promoting the use of environmentally sustainable technologies for improving energy efficiency and reducing the energy cycle's negative environmental impact. Each party is mandated to develop, implement and regularly update its domestic energy efficiency programs best suited to its circumstances.²⁷ The parties are also expected to cooperate and collaborate on a number of environment-related issues and plans.

Building on the provisions of the ECT, PEEREA requires its participating states to formulate clear policy aims for improving energy efficiency and reducing the energy cycle's negative environmental impact. However in contrast to other activities in the ECT, the PEEREA does not impose legally binding obligations. It is in the nature of a political commitment that is promoted through policy discussions based on analysis and exchange of experience between the member countries, invited independent experts and other international organizations. The implementation of PEEREA provides its member countries with a range of good practices and a forum in which to share experiences and policy advice on energy efficiency issues. Within this forum, particular attention is paid to aspects such as a national energy efficiency strategy, taxation, pricing policy in the energy sector, environmentally related subsidies, and other mechanisms for financing energy efficiency objectives.

4.2.2.10 Expansion of Opportunities for Foreign Investors in Specific Stages of Oil Exploration, Extraction, and Refinement

Article 18 of the ECT recognizes state sovereignty and sovereign rights over energy resources and reaffirms that these must be exercised in accordance with and

²⁷ Article 8, PEEREA.

subject to rules of international law.²⁸ It is also provided that the ECT shall in no way prejudice the rules of governing the system of property ownership of energy resources of respective parties, but in a manner without affecting the objectives of promoting access to energy resources, and exploration and development thereof on a commercial basis.²⁹

Further, Article 18 provides that each state shall continue to hold in particular the rights to decide the geographical areas within its area to be made available for exploration and development of its energy resources, the optimization of their recovery and the rate at which they may be depleted or otherwise exploited, to specify and enjoy any taxes, royalties, or other financial payments payable by virtue of such exploration and exploitation, and to regulate the environmental and safety aspects of such exploration, development and reclamation within its area, and to participate in such exploration and exploitation, inter alia, through direct participation by the government or through state enterprises. The ECT parties are also required to facilitate access to energy resources, inter alia, by allocating in a non-discriminatory manner on the basis of published criteria authorizations, licenses, concessions, and contracts to prospect and explore for or to exploit or extract energy resources.

4.3 India: Possible Implications of a Multilateral Agreement on Energy

Any possible multilateral agreement on energy modeled along the lines of NAFTA's Energy Chapter or the ECT, will have laws and regulations dealing with various aspects relating to energy including:

- Control on production and export of petroleum-based products;
- Domestic prices and pricing policy;
- Export tariffs;
- Taxation;
- Operation of State Trading Enterprises;
- Unfair trade practices;
- Investment; and
- Trade in services related to exploration, extraction, transportation, and processing of petroleum and other energy products.

Under the Indian legal framework, state control over many of these aspects has been dismantled and the energy sector has been substantially liberalized. Nevertheless, any NAFTA/ECT type obligations will have implications for the nature of regulatory control.

²⁸ Article 18(1), ECT.

²⁹ Article 18(2), ECT.

4.3.1 Indian Regulatory Framework: A Brief Overview

The key elements of the regulatory framework governing the energy sector in India are discussed below.

4.3.1.1 Atomic Energy

The Government has complete control over this sector. Atomic Energy is not open to private sector for investment and is presently a sector prohibited for Foreign Direct Investment (FDI). However, FDI is permitted for the mining and production of titanium ores, and zirconium minerals subject to certain conditions specified in the government regulations.

4.3.1.2 Electricity Generation, Transmission, and Distribution

These activities are governed under the framework of the Electricity Act which provides the framework for regulatory control and licensing requirements for specific activities. Full (100 %) FDI is allowed in these activities. An independent regulator is responsible for governance of the sector (Central Electricity Regulatory Commission at the central level and State Electricity Regulatory Commission at the level of each state in India).

4.3.1.3 Electricity Trading

The Electricity Act provides the regulatory framework for electricity trading, and specifies licensing requirements for the same. Full (100 %) FDI under the automatic route is permitted in electricity trading. However, FDI in power exchanges is limited to 49 % (comprising 26 % FDI and Foreign Institutional Investor (FII) limit of an additional 23 %).

4.3.1.4 Petroleum Oils and Petroleum Products

India has a detailed legal framework governing aspects ranging from prospecting and extraction of petroleum, acquisition of land and land rights for petroleum projects, production, refining and blending of petroleum, storage, import, transportation, and sale of petroleum.

All aspects of the petroleum sector are open to 100 % FDI under the automatic route except for refining by public-sector undertakings in which FDI is limited to 49 % after obtaining government approval. The nature of regulatory control essentially specifies government control over specific aspects. For example, the

Petroleum and Natural Gas Regulatory Board (“PNGRB”) is a statutorily constituted regulatory authority that has the power to grant authorization for the development, operation, and maintenance of petroleum and petroleum product pipelines and regulate the ‘Transportation Tariff’ charged for the use of such pipelines.

Prospecting and extraction of petroleum is governed by the New Exploration and Licensing Policy (NELP), under which a competitive bidding process is undertaken annually. The selected entities have to enter into a Production Sharing Contract (PSC) and a Joint Operating Agreement (JOA) that collectively regulates the exercise of the prospecting and extraction rights vested with such entity with the Government.

While there is no general regulation governing sale price of petroleum, the Central Government regulates the price at which petroleum is sold by the main public-sector undertakings (IOCL, BPCL, and HPCL) that dominate the market of petroleum. The Government also regulates the price at which petroleum and natural gas can be sold by companies that have been granted authorization pursuant to the NELP.

4.3.1.5 Natural Gas and LNG

The natural gas sector is open to 100 % FDI and is governed by the same legal framework as for petroleum oils and products as discussed above. The LNG sector is also open to FDI, and only regulated to the extent that entities seeking to establish LNG Import Terminals are required to be registered with the PNGRB pursuant to the PNGRB (Eligibility Conditions for Registration of Liquefied Natural Gas Terminal) Rules, 2012.

4.3.1.6 Gas Transmission and Distribution

This sector is open to 100 % FDI and regulated by the PNGRB and any entity undertaking or seeking to undertake establishment, operation, and maintenance of gas pipelines requires authorization from PNGRB. The PNGRB also regulates the tariff that can be charged for transportation of gas by pipeline companies.

4.3.1.7 City Gas Distribution

City gas distribution is also open to 100 % FDI and is regulated by the PNGRB, and any entity undertaking or seeking to undertake establishment, operation, and maintenance of city gas distribution network requires authorization from PNGRB. The PNGRB also regulates the tariff that can be charged by city gas distribution companies.

4.3.1.8 Coal

The coal sector is a nationalized sector and all aspects of coal including mining, storage, distribution, and allocation are regulated by the Central Government. The coal mines were nationalized in 1971, and the consolidated statute for coal mines nationalization was passed in 1973, which is the Coal Mines (Nationalization) Act, 1973. The coal mines are under the overall jurisdiction of Coal India Limited, a public-sector undertaking completely controlled by the Central Government.

The exploration/prospecting of coal is completely governed by the Central Government. The Geological Survey of India together with Mineral Exploration Corporation and Central Mine Planning and Design Institute Limited can undertake exploration/prospecting of coal. However, in 2012 the Government issued the Auction by Competitive Bidding of Coal Mines Rules, 2012, which opened the prospecting of mining of coal for eligible government companies and government corporations including those of the state governments.

The Coal Mines (Nationalization) Act, 1973 was amended in 1976 to allow only the following persons to undertake coal mining operations in any form: (i) the Central Government or a government company or a corporation owned, managed or controlled by the Government; (ii) a person with whom a company controlled by the Central Government that has been vested with a lease to mine coal enters into a sub-lease on such terms and conditions as may be stipulated for undertaking coal mining operations; and (iii) a company engaged in the production of iron and steel. Thereafter, the Government formulated the Guidelines for Allocation of Captive Blocks and Conditions of Allotment.

FDI in the coal sector is limited to the following:

- Coal and lignite mining for captive consumption by power projects, iron and steel, cement units, and other eligible activities permitted under and subject to the provisions of the Coal Mines (Nationalization) Act, 1973—100 % FDI under the automatic route.
- Setting up coal processing plants like washeries subject to the condition that such a company shall not do coal mining and shall not sell washed coal in the open market—100 % FDI under the automatic route.

4.3.2 Tariffs on Energy Goods

India, like many other WTO members has bound its tariffs for energy goods at a fairly high level in its GATT Schedule, even though its applied rate of duty is significantly lower. It is also interesting to note that in its Free Trade Agreements (FTAs) with key partners (ASEAN, Singapore, Korea, Malaysia, SAFTA), India has committed to lower preferential tariffs.

Table 4.1 annexed at the end of this chapter provides a comparison of India's bound tariffs under its GATT/WTO Schedule, the applied tariff, and the preferential tariff applied to its trading partners under the FTAs.

4.3.3 Impact of NAFTA's Energy Chapter and the Energy Charter Treaty on the Indian Regulatory Framework Governing Energy

It is important to note that Chap. 6 of NAFTA incorporates rules on minimum and maximum export price requirements, export taxes, energy regulatory measures which are relevant for issues such as production restrictions and dual pricing. Apart from this the overall framework of NAFTA rules on trade in goods, services, investment, and competition policy apply to energy trade as well.

While evaluating the impact of NAFTA-type obligations on India, it is particularly interesting to note the extensive reservations and exemptions that Mexico has availed both in relation to application of the principles of NAFTA Chap. 6 on Energy, and Chap. 11 on Investment-related obligations with specific reference to the energy sector. Broadly, while the electricity sector in Mexico was liberalized to some extent in the early 1990s, like India, there is a strong element of state control over various aspects. It is for this reason that under NAFTA text, Mexico reserved for itself various activities like:

- Exploration and exploitation of crude oil and natural gas;
- Refining or processing of crude oil and natural gas;
- Production of artificial gas, basic petrochemicals, and their feedstocks and pipelines;
- Activities like foreign trade, transportation, storage, distribution, including the firsthand sales of crude oil, natural and artificial gas, goods obtained from the refining or processing of crude oil and natural gas, and basic petrochemicals;
- Activities related to the supply of electricity as a public service in Mexico, including the generation, transmission, transformation, distribution, have also been listed as a reservation.

It is important to note here that the major restrictions on private sector involvement in energy-related activities which are present in the domestic laws and regulations of Mexico have been reflected in the energy trade provisions of NAFTA.

The ECT, based on the European Energy Charter which was signed in 1991, was opened for signature in December 1994, and came into effect on 16 April 1998. The focus of the ECT was on five areas related to energy-related trade and investment: Investment; Trade; Transit; Dispute Resolution; and Energy Efficiency and Environmental Concerns. With respect to trade-related provisions, the ECT has adopted the principle of non-derogation from WTO rules which are applicable

to energy trade as the baseline standard, its provisions, especially those concerned with investment rules, competition policy and transit, may be of significance during any potential negotiations or discussions on energy trade within the WTO.

As discussed in this chapter, ECT's provisions are far more advanced and detailed with regard to their impact on a country's regulatory framework, as compared to NAFTA Chap. 6. Unlike NAFTA, the ECT does not have any provisions on special treatment for any country depending on its economic development status. ECT requirements would generally have impact on government regulatory control in aspects such as:

- Imposition of duty, tax, or other charge on exports of energy goods;
- Prohibition of minimum/maximum prices for exports;
- Import/export licensing for energy goods;
- Requirements that energy regulatory measures cannot discriminate between domestic and foreign enterprises, or give preference to domestic over imported products;
- Investment and competition-related obligations.

Apart from the above, the ECT has specific provisions regulating "Energy Transit Facilities", which require parties to provide national treatment to any energy transit facility and facilitate interconnection between energy transit facilities and parties shall not place obstacles in the way of new capacity being established.

The Indian regulatory framework governing the various aspects of energy as discussed in Sect. 4.3.1 constitute regulatory measures governing the energy sector. Although the energy sector in India has largely been liberalized and 100 % foreign investment is allowed in most aspects of the energy sector, the provisions of the NAFTA and the ECT will have an impact on the specific nature of regulatory controls that are prevalent under the Indian legal framework.

The most significant impact for India would likely be on the role of state enterprises in the energy sector in India and the extensive regulatory framework. A NAFTA and ECT-type framework of provisions would mean the following for India:

- Dismantling of regulatory controls in the energy sector;
- No controls on pricing, exports;
- Rules on investment and competition;
- Impact on licensing norms and State monopolies;
- Environmental obligations;
- Energy transit, including transit infrastructure; and
- Binding and reducing tariffs on imports of energy goods.

We discuss in brief the key areas of such impact.

4.3.3.1 Import Duties

The coming into play of tariff reduction obligations under the NAFTA/ECT-type obligations would result in reduction/elimination of tariffs that India currently maintains on energy products listed in the annexed Table 4.1.

4.3.3.2 Export Duties and Export Pricing

Export duties/taxes and export prices are prohibited under both the NAFTA and the ECT. With regard to both instruments, the prevailing framework under the WTO provides some flexibility.

4.3.3.3 Import/Export Licensing

Both NAFTA and ECT impose obligations with regard to import/export licensing for energy goods. Under the NAFTA, Mexico has a clear exemption and is allowed to restrict foreign trade in certain energy goods to specific parties. The ECT however does not have any provisions allowing for special dispensation for any of its members.

4.3.3.4 Investment-Related Issues

NAFTA's Chap. 6 provides for obligations toward an investor both pre and post establishment. The ECT on the other hand only involves soft law obligations in the pre-establishment phase (this includes obligation to encourage investors to invest, and accord fair and equitable treatment to investors'). Post-establishment, both the ECT and NAFTA have similar provisions for protection of an investor. Both the NAFTA and ECT require that their parties do not apply any trade-related investment measure that is inconsistent with the provisions of Article III or XI of the GATT. The ECT describes measures that are included under this provision—which are similar to the ones listed in the Annex to the WTO's TRIMs Agreement. Other than this, the ECT has more elaborate provisions which requires its parties, while exercising its sovereign rights, to ensure that the objectives of promoting access to energy resources and their exploitation on a commercial basis, is not adversely affected. Exploration and access to energy resources can be regulated, the key obligation on states in this regard is to ensure non-discrimination and allocation on the basis of published criteria, authorizations, contracts, etc. The provisions of the ECT also provide for a very strict investment framework, trade regulatory framework, and competition policy framework to prevent countries and companies from expropriating assets built by foreign investment.

Under NAFTA, as discussed earlier, special provisions and exemptions have been provided with reference to investments in Mexico in the energy sector. However, the ECT does not have any provisions on special and differential treatment.

4.3.3.5 Export Prohibitions

With regard to petroleum and petroleum products, as discussed above the provisions of the PSCs under NELP prohibit export of any petroleum oil discovered pursuant to PSC. This would go against obligations imposed under both NAFTA and the ECT.

4.3.3.6 Transit of Energy Goods

The NAFTA does not have substantive provisions on this issue. Under Article 7 of the ECT, parties are required to “take the necessary measures to facilitate the Transit of Energy Materials and Products” on a non-discriminatory basis. There are also broad undertakings to encourage cooperation in the modernization of energy transport facilities and generally to facilitate the smooth operation (including interconnection) of such facilities. However, parties are not required to permit the construction of transport facilities or additional transit through new facilities where it can demonstrate that this “would endanger the security or efficiency of its energy systems, including the security of supply”. The ECT has specific provisions regulating “Energy Transit Facilities”, which require parties to provide national treatment to any energy transit facilities and facilitate interconnection between energy transit facilities and parties shall not place obstacles in the way of new capacity being established. In relation to India, similar obligations would impact essentially natural gas transmission pipelines intended to transit through Indian territory (for example—Iran, Pakistan, India, Bangladesh Pipeline) or electricity transmission lines (for example—Nepal–India–Bangladesh transmission link). It is only if a Party is able to demonstrate that an energy transit facility would endanger the security or efficiency of its energy systems including security of supply that it can prohibit development of an energy transit facility through its territory.

4.3.3.7 Competition-Related Obligations

NAFTA does not specifically deal with trade and competition in the energy sector. Under NAFTA, the obligations relating to competition essentially require the

parties consult from time to time about the effectiveness of their measures, and cooperate on issues of competition law enforcement policy. These ‘soft obligations’ are however not subject to the dispute-settlement provisions of the NAFTA. By contrast, the ECT takes a more expansive approach to dealing with trade and competition in the energy sector, through a mix of ‘soft’ and ‘hard’ obligations. The ‘soft law’ obligation on parties is to “work to alleviate market distortions and barriers to competition” in the sector and to cooperate with other parties in this respect. It also provides for a framework for collaboration between competition authorities and allows a party to request competition law action and to raise it under the party-to-party dispute settlement procedure. Although the ECT does not obligate any contracting party to introduce mandatory third-party access or prevent use of pricing systems, which within a particular category of consumers, apply identical prices to customers in different locations, it does impose obligations on parties to work to promote access to markets on commercial terms and generally to develop and open and competitive market for energy materials and products, and effectively impose a framework that reduces discretion and control of a country’s government control and intervention in the energy sector to an acceptable minimum.

Under the Indian legal regime anti-competition issues are regulated by Competition Commission of India. It is important to note that issues such as restrictive trade practices, competition, abuse of dominant position under the Indian legal regime is defined in a specific manner. Regulating competition has always been viewed by India as a matter for internal assessment. It is for this reason that India has opposed competition issues generally under the WTO framework. In India’s recently concluded FTAs with Japan and Korea, there is a separate chapter dedicated to competition, whose emphasis is primarily on ‘soft law’ obligations such as coordination, cooperation and exchange of information, and not on any substantive legal obligations.

4.3.3.8 State Enterprises

Despite substantial liberalization, the energy sector in India continues to be primarily dominated by state enterprises and government monopolies in critical areas (such as atomic energy). Exploration/prospecting of coal is limited to only state enterprises. Mining of coal is only for state enterprises other than companies engaged in iron and steel (which is a licensed industry). These practices would be subject to the provisions of Chap. 15 NAFTA (“Competition Policy, Monopolies and State Enterprises”), and provisions of the ECT. Neither NAFTA nor ECT prohibit existence of state monopolies. However, state monopolies and state enterprises are required to comply with specific requirements. The Indian regulatory framework which vests powers with government enterprises/authorized state

monopolies, presently do not have the detailed regulatory requirements as specified under the NAFTA and ECT in respect of state enterprises.

4.3.3.9 Environment

As discussed in Sect. 4.2, the ECT has strong provisions on environmental obligations relating to energy trade. It also imposes on Eastern European countries and transit countries a need to have clear policies on higher “energy efficiencies and related environmental aspects” through a Protocol on Energy Efficiency and Related Environmental Aspects (“PEEREA”). The PEEREA has the consequence of imposing higher compliance costs of an energy efficiency system and environment impact regulation so as to ensure that their internal costs of consumption and provision of energy increase over time so as to meet the higher costs in the developed European countries. The countries most affected by PEEREA are countries like the Czech Republic, Slovakia, Estonia, Moldova, Lithuania, Poland, Hungary, Turkey, Bulgaria, and Romania. In the context of India, none of these principles can be made applicable particularly in light of the state of the neighboring countries and high levels of security and strategic security concerns particularly Pakistan, Bangladesh, Nepal, China, and Myanmar.

In India, the energy efficiency framework is a separate and distinct regulatory framework that is not applicable to the entire energy chain but essentially only the end-use and equipment that actually utilize the energy. The framework is applicable only for select sectors, of which only thermal power plants would qualify as an “energy sector”. The other sectors to which mandatory energy efficiency norms apply in India are fertiliser, cement, pulp and paper, textiles, chlor-alkali, iron and steel, aluminum, and railways. The PEEREA has substantive obligations across all energy sectors involving both goods and services.

4.3.3.10 Atomic Energy Sector

The limitations on Atomic Energy sector in Indian regulatory framework would need to be reviewed in light of the ECT and NAFTA-type provisions. Only limited security measures and non-proliferation measures needed pursuant to fulfill obligations under the Treaty on Non-Proliferation of Nuclear Weapons, the Nuclear Suppliers Guidelines and other International Nuclear non-proliferation obligations would be permissible. The present legal regime closes the atomic energy market to non-government entities and such a broad closure may not be justifiable only on security grounds under the security exception of the ECT.

4.4 Conclusions

Energy is an issue that is strategically important for all countries whether they are inherently energy-surplus or energy-deficit countries. Most countries worldwide typically use import restrictions as well as pricing regulations in order to regulate energy production, consumption, and trade.

As discussed, the WTO framework is broad and comprehensive and covers trade in goods and services. However, this framework does not address all the issues that arise in the context of trade in energy. An UNCTAD study notes that the past practice under the GATT/WTO is exemplified by the unwritten, unacknowledged, but nonetheless real ‘gentleman’s agreement’ that has largely kept oil outside of the GATT/WTO system, and that both energy importing and energy-exporting countries have employed trade restrictions in pursuit of their diplomatic or security objectives, and neither side has opted to use the WTO’s rules to challenge their trading partners’ measures (UNCTAD 2000). It is interesting to note that even in the GATT schedules of concessions (tariff schedules) of developed countries such as US and Japan, oil and electricity remain unbound.

Energy-related discussions are however likely to gain prominence under the WTO with the increasing presence of oil-producing countries becoming WTO members in the past decade. WTO members have utilized the accession procedure to impose specific WTO-plus obligations that would impact energy trade on such countries as part of the accession agreements. The Doha Ministerial Declaration, as discussed in Sect. 4.1 of this chapter, also highlights the need for deeper discussions on several aspects impacting trade in energy.

As discussed in this chapter, the NAFTA and the ECT are two examples of legally binding instruments that address the trade-energy linkage. Since these international arrangements were negotiated keeping in perspective the particularities of the energy sector, several of the ambiguous issues pertaining to energy trade have been addressed and rules have been formulated in respect of such issues.

It is important to bear in view that both the NAFTA and the ECT emerged in distinct and very specific economic contexts. In the context of NAFTA, it is an agreement that includes both a major importing country (the United States) and an important exporting country (Mexico) at significantly different levels of economic development. It also includes Canada—an economically advanced country that is considered generally to be self-reliant in energy, and also imports and exports different types of energy products. The ECT has a wider membership—51 European and Asian countries have signed or acceded to the ECT. All EU states are individual signatories, but the Treaty has also been signed collectively by the European Community.

If a multilateral agreement on energy is negotiated, it is likely to comprise of elements as embodied under the NAFTA and the ECT. As discussed in Sect. 4.3 of

this chapter, the provisions under both treaties will have significant implications for India's regulatory framework. The fact that there would be changes required in the domestic regulatory framework cannot in itself be the definitive guiding principle regarding India's engagement. The domestic regulatory framework has been witnessing several changes such as dismantling of regulatory controls and ongoing liberalization process across sectors which have significantly enhanced private participation in sectors such as electricity, petroleum, and natural gas. Divestment in public-sector enterprises is also another core area where significant progress has been made. India's Hydrocarbon Vision 2025 and the Planning Commission's Twelfth Five Year Plan have also emphasized the need for regulatory reform in the energy sector as an important means by which to attract inbound investment. India's emergence as a significant exporter of petroleum products is also a factor to be considered for India's market access. Another key fact is the increasing investment by India's oil companies, including public-sector enterprises in oil and gas assets worldwide.

It needs to be underscored here that this chapter is not saying that the NAFTA's energy chapter or the ECT are panaceas for any energy deficit country, or present any quick-fix solutions for energy security. As explained in this chapter, both these instruments resulted from a very specific context of rights and obligations between the countries that became signatories to it.

As a way forward, a key issue for consideration is the most appropriate forum to discuss energy. Should this be an ECT-type framework or should the discussions be within the WTO framework? As discussed above, the WTO provisions impact trade in energy goods and services. The ECT too recognizes this. In view of its strong established institutional presence, it may be prudent for the discussions to be held within the WTO framework. Another important reason for this is because ECT's framework, as discussed earlier, does not have any room for provisions relating to 'special and differential (S&DT) treatment' for developing countries. S&DT provisions, on the other hand, are fairly well entrenched within the WTO and would need to be further developed and elaborated in the event of any energy sector specific agreement.

In view of the regulatory framework in India, it is important to draw lessons from Mexico's experience with regard to its obligations under the NAFTA. At the same time, Mexico's exceptions would need to be worked on in order to ensure the availability of a wider policy space in key areas. Activities on which S&DT or specific exceptions in a potential multilateral energy framework in the Indian context should, for example, have the following aspects:

- A carve-out for the atomic energy sector as a whole due to its significant linkages with security considerations;
- Policy flexibility with regard to operation of state-owned enterprises in sectors such as coal mining, oil, and natural gas;

- Preservation of present terms and conditions under NELP, such as prohibition on exports under the PSCs;
- Regulatory control over activities related to electricity transmission, distribution, and trading;
- Reservation for activities like foreign trade, transportation, storage, distribution of crude oil, natural and artificial gas, goods obtained from the refining or processing of crude oil and natural gas, and basic petrochemicals;
- Ability to have flexibility to make private investments subject to regulatory controls including strict conditions for licensing; and
- Any obligations relating to competition concerns should only be soft law obligations in order to allow policy flexibility to operate the competition law according to each country's jurisprudential developments.

India's interests in energy negotiations would need to be strategically assessed since India is essentially an energy deficient country, and seeks market access into energy-rich countries and imports from such countries to enhance its energy security. From the strategic perspective of energy security, what needs to be assessed is whether India stands to gain more from being a party to an energy treaty, or not.

Annex

Table 4.1 lists India's tariff schedule commitments in the WTO for the energy products which are covered in the NAFTA and ECT. All the energy products have been listed according to their HS Code and the relevant data on bound tariff, applied tariff and preferential applied tariff has been provided in the corresponding columns. It is also important to note that the coverage of energy goods and products in NAFTA and ECT is predominantly similar. However, some minor differences may be observed. For instance, petroleum jelly; paraffin wax, micro-crystalline petroleum wax, slack wax, ozokerite, lignite wax, peat wax, other mineral waxes, and similar products obtained by synthesis or by other processes, have been mentioned in NAFTA but are not covered in the ECT. Similarly, products like fuel wood, in logs, in billets, etc., and charcoal are mentioned in the ECT but not in NAFTA. But since the analysis is based on both NAFTA and ECT, all the energy products covered by these two have been included in the table.

Table 4.1 India's tariffs on energy-related products

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
261210—uranium ores and concentrates	40.0	2.0	Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rate for Sri Lanka	1.5 0
2701—coal, briquettes, ovoids, and similar solid fuels manufactured from coal	31.13 (partially bound)	5.8		
270111—anthracite, whether or not pulverized, non-agglomerated		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rate for Singapore; Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	3 3.75 0 2 3
270112—bituminous coal, whether or not pulverised, non-agglomerated		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	4.5 0 2
270119—coal, whether or not pulverised, non-agglomerated (excluding anthracite and bituminous coal)		3.3	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	2 2.5 0 1.33

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
270120—briquettes, ovoids, and similar solid fuels manufactured from coal		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA)	0
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	0
2702—lignite, whether or not agglomerated, excluding jet		10.0		
270210—lignite, whether or not pulverised, non-agglomerated (excl. jet)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
270220—agglomerated lignite (excl. jet)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA)	0
			Least Developed Countries (LDC) duties	4
			Free Trade Agreement duty rate for Sri Lanka	0

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
2703—peat (including peat litter), whether or not agglomerated		10.0		
270300—peat, incl. peat litter, whether or not agglomerated		10.0	Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Least Developed Countries (LDC) duties	4
2704—coke and semi-coke of coal, of lignite or of peat, whether or not agglomerated; retort carbon	25.0	10.0		
270400—coke and semi-coke of coal, of lignite or of peat, whether or not agglomerated; retort carbon		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
2705—coal gas, water gas, producer gas, and similar gases, other than petroleum gases, and other gaseous hydrocarbons		10.0		

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
270500—coal gas, water gas, producer gas, lean gas, and similar gases (excl. petroleum gases and other gaseous hydrocarbons)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	5 9.38 7
2706—tar distilled from coal, from lignite or from peat, and other mineral tars, whether or not dehydrated or partially distilled, including reconstituted tars		10.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	0 4
270600—tar distilled from coal, from lignite or from peat, and other mineral tars, whether or not dehydrated or partially distilled, incl. reconstituted tars		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	5 9.38 7 0 4

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
270750—aromatic hydrocarbon mixtures of which ≥ 65 % by volume, incl. losses, distils at 250 °C by the ASTM D 86 method (excl. chemically defined compounds)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
			Free Trade Agreement duty rate for Singapore	2
270799—oils and other products of the distillation of high temperature coal tars; similar products in which the weight of the aromatic constituents exceeds that of the non-aromatic constituents (excl. chemically defined compounds, benzol "benzene", toluol "toluene", xylol "xylenes", naphthalene, aromatic hydrocarbon mixtures of subheading 2707.50, and creosote oils)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	9.38
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)	7
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
			Free Trade Agreement duty rate for Singapore	2

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
2708—pitch and pitch coke, obtained from coal tar or from other mineral tars		10.0	
270810—pitch obtained from coal tar or from other mineral tars		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 5 Free Trade Agreement duty rate for Korea, Rep. of 9.38 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 7
270820—pitch coke obtained from coal tar or from other mineral tars		10.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 4 Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 5 Free Trade Agreement duty rate for Korea, Rep. of 9.38 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 7
2709—petroleum oils and oils obtained from bituminous minerals, crude		5.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 4

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
270900—petroleum oils and oils obtained from bituminous minerals, crude		5.0	Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties
2710—petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic constituents of the preparations; waste oils		9.0	
271011—light oils and preparations, of petroleum or bituminous minerals which >=90 % by volume “incl. losses” distill at 210 °C “ASTM D 86 method”		7.5	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
271019—Medium oils and preparations, of petroleum or bituminous minerals, n.e.s.		9.7	Free Trade Agreement duty rate for Korea, Rep. of 7.83 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 5.93 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA) 1.11 Free Trade Agreement duty rate for Sri Lanka 0 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA) 0 Least Developed Countries (LDC) duties 4
271091—waste oils containing polychlorinated biphenyls [PCBs], polychlorinated terphenyls [PCTs] or polybrominated biphenyls [PBBs]		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2 Least Developed Countries (LDC) duties 4
271099—waste oils containing mainly petroleum or bituminous minerals (excl. those containing polychlorinated biphenyls [PCBs], polychlorinated terphenyls [PCTs] or polybrominated biphenyls [PBBs])		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 4
2711—petroleum gases and other gaseous hydrocarbons		7.1	
271111—natural gas, liquefied		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 3 Free Trade Agreement duty rate for Korea, Rep. of 3.75 Free Trade Agreement duty rate for Sri Lanka 0

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
271112—propane, liquefied		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	2
271113—butanes, liquefied (excl. of a purity of $\geq 95\%$ of <i>N</i> -butane or isobutane)		5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	3
			Free Trade Agreement duty rate for Korea, Rep. of	3.75
			Free Trade Agreement duty rate for Singapore	1
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	2
271114—ethylene, propylene, butylene, and butadiene, liquefied (excl. ethylene of a purity of $\geq 95\%$ and propylene, butylene and butadiene of a purity of $\geq 90\%$)		10.0	Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
271119—gaseous hydrocarbons, liquefied, n.e.s. (excl. natural gas, propane, butane, ethylene, propylene, butylene and butadiene)		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN)	5
			Free Trade Agreement duty rate for Korea, Rep. of	4.5
			Free Trade Agreement duty rate for Singapore	2
			Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	4
271121—natural gas in gaseous state		5.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka	0
			Least Developed Countries (LDC) duties	2

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
271129—hydrocarbons in gaseous state, n.e.s. (excl. natural gas)		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)
2712—petroleum jelly; paraffin wax, micro-crystalline petroleum wax, slack wax, ozokerite, lignite wax, peat wax, other mineral waxes, and similar products obtained by synthesis or by other processes, whether or not colored		10.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties
271210—petroleum jelly		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)
271220—paraffin wax containing <0.75 % by weight of oil		10.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
271290—paraffin wax, microcrystalline petroleum wax, slack wax, ozokerite, lignite wax, peat wax, other mineral waxes, and similar products obtained by synthesis or by other processes, whether or not colored (excl. petroleum jelly and paraffin wax containing <0.75 % by weight of oil)		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties
2713—petroleum coke, petroleum bitumen, and other residues of petroleum oils or of oils obtained from bituminous minerals		7.5	
271311—petroleum coke, non-calced		5.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka; Free Trade Agreement duty rate for Singapore Least Developed Countries (LDC) duties
271312—petroleum coke, calced		5.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
271320—petroleum bitumen		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0
			Least Developed Countries (LDC) duties 4
271390—residues of petroleum oil or of oil obtained from bituminous minerals (excl. petroleum coke and petroleum bitumen)		10.0	Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0
			Least Developed Countries (LDC) duties 4
2714—bitumen and asphalt, natural; bituminous or oil shale and tar sands; asphaltites and asphaltic rocks		10.0	
271410—bituminous or oil-shale and tar sands		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 5
			Free Trade Agreement duty rate for Korea, Rep. of 7.5
			Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6.2
			Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0
			Least Developed Countries (LDC) duties 4

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
271490—bitumen and asphalt, natural; asphaltites, and asphaltic rocks		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)
			5
			7.5
			6.2
2715—bituminous mixtures based on natural asphalt, on natural bitumen, on petroleum bitumen, on mineral tar or on mineral tar pitch (for example, bituminous mastics, cut-backs)		10.0	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka; Free Trade Agreement duty rate for Singapore Least Developed Countries (LDC) duties
			4
271500—bituminous mastics, cut-backs, and other bituminous mixtures based on natural asphalt, on natural bitumen, on petroleum bitumen, on mineral tar or on mineral tar pitch		10.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)
			5
			7.5
			6.2
			0
			4

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
2716—electrical energy. (optional heading)		0.0	
271600—electric energy	0.0		
284410—natural uranium and its compounds; alloys, dispersions, incl. cermet, ceramic products and mixtures containing natural uranium or natural uranium compound [Euratom]	40.0	7.5	Free Trade Agreement duty rates for Malaysia, Singapore and Thailand under the Association of Southeast Asian Nations (ASEAN) 5 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 3
284420—uranium enriched in U 235 and its compounds; plutonium and its compounds; alloys, dispersions, incl. cermet, ceramic products, and mixtures containing uranium enriched in U 235, plutonium or compounds of these products [Euratom]	40.0	7.5	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 5 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 3
284430—uranium depleted in U 235 and its compounds; thorium and its compounds; alloys, dispersions, incl. cermet, ceramic products, and mixtures containing uranium depleted in U 235, thorium or compounds of these products	40.0	7.5	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) 5 Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) 6 Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka 0 Least Developed Countries (LDC) duties 3

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
284440—radioactive elements, isotopes, and compounds, and alloys and dispersions, incl. cermet, ceramic products, and mixtures, containing these elements, isotopes, and compounds; radioactive residues (excl. natural uranium, uranium enriched, and depleted in U 235; plutonium, thorium, and compounds of these products)	40.0	7.5	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA) Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties
284450—spent “irradiated” fuel elements “cartridges” of nuclear reactors [euratom]	40.0	7.5	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rates for Pakistan and Sri Lanka under the South Asian Free Trade Area (SAFTA)
284510—heavy water (deuterium oxide)	40.0	7.5	Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff	
290110—saturated acyclic hydrocarbons	40.0	5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Singapore; Free Trade Agreement duty rate for Sri Lanka Free Trade Agreement duty rates for Asia-Pacific Trade Agreement (APTA); Free Trade Agreement duty rate for Bangladesh under the Asia-Pacific Trade Agreement (APTA) Least Developed Countries (LDC) duties	3 3.75 0 4.25 2 3
440110—fuel wood, in logs, billets, twigs, faggots or similar forms		5	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Singapore; Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	3.75 0 0 2
4402—wood charcoal (including shell or nut charcoal), whether or not agglomerated	40.0	5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Singapore; Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	3 3.75 0 2
440210—bamboo charcoal, incl. shell or nut charcoal, whether or not agglomerated (excl. used as a medicament, mixed with incense, activated bamboo charcoal, and in the form of crayons)	40.0	5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties	3 3.75 0 2

(continued)

Table 4.1 (continued)

HS Code (with description)	Bound tariff	Applied tariff	Preferential tariff
440290—wood charcoal, incl. shell or nut charcoal, whether or not agglomerated (excl. bamboo charcoal, wood charcoal used as a medicament, charcoal mixed with incense, activated charcoal, and charcoal in the form of crayons)	40.0	5.0	Free Trade Agreement duty rates for Malaysia, Singapore, and Thailand under the Association of Southeast Asian Nations (ASEAN) Free Trade Agreement duty rate for Korea, Rep. of Free Trade Agreement duty rates for Bangladesh, Bhutan, Maldives, and Nepal under the South Asian Free Trade Area (SAFTA); Free Trade Agreement duty rate for Sri Lanka Least Developed Countries (LDC) duties
			3 3.75 0 2

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